

Music Encoding Initiative Tag Library  
2010-05 Release

MEI Technical Document No. 2

Prepared and maintained by the Music Encoding Initiative Working Group



**DFG**

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Charlottesville and Detmold, 2010

## **Music Encoding Initiative Tag Library, 2010-05 Release**

MEI Technical Document No. 2

This tag library represents the 2010-05 release of the Music Encoding Initiative schema.

The MEI Council is responsible for creating and updating the MEI schema, guidelines, and tag library.

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# Introduction

The Music Encoding Initiative (MEI) schema is a set of rules for recording the intellectual and physical characteristics of music notation documents so that the information contained in them may be searched, retrieved, displayed, and exchanged in a predictable and platform-independent manner. The MEI rules are expressed in the form of a RelaxNG (RNG) schema. Because schemas are intended to be read chiefly by computers, they are often accompanied by documentation designed for human comprehension. This tag library, which is a comprehensive list of MEI elements, is one such piece of documentation. It is intended to serve as a reference tool for music encoders. Through the use of natural-language definitions and examples, it assists users of MEI in achieving effective and consistent markup. Despite translating XML and RNG terminology and concepts into more accessible language, the tag library is still a technical document that presupposes a minimal understanding of XML and music notation. Novice encoders will need to supplement their use of the tag library by consulting forthcoming MEI application guidelines, attending introductory MEI workshops and training classes, and referring to other information sources.

As a natural-language translation of the MEI schema, the tag library conveys information about the three principal tasks accomplished by the schema. First, the schema breaks down the content of music notation documents into data fields or categories of information called "elements". All of these elements are named, defined, and described in the MEI Tag Library. Second, the tag library identifies and defines attributes associated with those elements. Attributes are characteristics or properties that further refine the element. Last, and perhaps most importantly, the tag library expresses the schema structure by explaining the relationship between elements, specifying where the elements may be used and describing how they may be modified by attributes. While two of the basic purposes of MEI are to facilitate the searching and display of encoded music notation documents in an electronic environment, nothing in the tag library addresses their specific implementation. Searching and display are entirely dependent on software applications outside the scope of the MEI model.

The MEI schema contains only a few required elements, the rest are optional. Therefore, the amount of markup desired will vary from one situation to another depending on intellectual, technical, and temporal considerations. Creating encoded music notation documents for inclusion in union databases may also result in tagging requirements that are separate from those dictated by the schema.

The tag library is divided into five sections. It begins with an outline of MEI Design Principles. This is followed by an overview of the structure of a typical MEI document and an explanation of terms and conventions used in the tag library. Element definitions comprise the fourth and largest section of the tag library, and an index by element name concludes the documentation.

Suggestions for new elements or revised descriptions may be submitted to the MEI Working Group via the MEI discussion list at [mei-l@lists.uni-paderborn.de](mailto:mei-l@lists.uni-paderborn.de).

# MEI Design Principles

This section of the tag library defines principles and criteria for designing, developing, and maintaining an XML-based encoding scheme for music notation documents.

## ***Definitions and Parameters***

- A music notation document is one that contains music notation; that is, any one of a number of "visual analogues of musical sound, either as a record of sound heard or imagined, or as a set of visual instructions for performers."<sup>1</sup>
- The encoding scheme permits both the creation of new music notation documents and the conversion of existing ones from print and other electronic formats. However, conversion of existing documents may require revisions in content or rearrangement of information.

## ***General Principles***

- No prima facia distinction is made between a primary source of music notation, such as an autograph or published score, and a secondary source, such as a scholarly edition based on one or more primary sources. The tag set encompasses both, and the encoder must choose the elements and attributes most appropriate in each case.
- As an encoded representation of one or more music notation documents, an MEI file may be employed as a surrogate for the original materials.
- Although the encoding scheme does not define or prescribe intellectual content for music notation documents, it does define content designation and is intended to be used with available data content standards. MEI identifies the essential data elements within music notation documents and establishes codes and conventions necessary for capturing and distinguishing information within those elements for future action or manipulation. While there are a few elements that ought to appear in any MEI document, various intellectual, technical, and economic factors influence the level of detail of analysis and encoding actually undertaken. Taking this into consideration, the encoding scheme is designed with a minimum of required elements and allows for progressively more detailed levels of description as desired.
- The encoding scheme preserves and enhances the current functionality of existing music notation documents. It permits identification of document structures and content that support description, navigation, analysis, and online and print presentation.
- The encoding scheme is intended to facilitate interchange between notational tools. It aims to assist in the creation of more effective and consistent encoding, encourage the creation of union databases of music notation documents, and permit the reuse of encoded data for multiple output purposes. It will also ensure that machine-readable music notation documents will outlive changing hardware and software environments because they are based on a platform-independent standard.

## ***Structural Features***

- The encoding scheme is based on eXtensible Markup Language (XML), a text-based format for representing structured information. It is expressed as a RelaxNG (RNG) schema, referred to as the "Music Encoding Initiative" or "MEI" schema.
- Related or complementary standards, such as the Text Encoding Initiative (TEI) Guidelines for Electronic Text Encoding and Interchange, the Encoded Archival Description (EAD) DTD, MARC formats, existing notation encoding schemes, etc. have been consulted and employed as appropriate. The data model includes a header that is comparable to the TEI header, and TEI and EAD naming

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<sup>1</sup> Ian D. Bent, et al. "Notation." Grove Music Online. Oxford Music Online. 25 May. 2010  
<<http://www.oxfordmusiconline.com/subscriber/article/grove/music/20114>>.

conventions and tag structures have been used whenever feasible. With respect to metadata, MEI recognizes the inter-relationship between the metadata content found in the MEI header and that of catalog records, authority records, and finding aids, and it provides for the use of an encoding equivalency attribute for MEI elements corresponding to fields in other metadata standards.

- The encoding standard consists of three parts: an RNG-compliant schema, a tag library containing definitions of the schema's elements and attributes as well as examples of tag use, and application guidelines.
- To ensure broad international and multi-repertoire application of MEI, existing musical terminology was used in building the data model where practical. In addition, a method for localization of the data model's names has been provided. Finally, extensive use of attributes in the schema permits the refinement of element meanings with specific geographic or temporal contexts.

### ***Control and Maintenance***

- Control and maintenance of the schema and its documentation will be provided by a maintenance agency working in concert with the national and international music communities, assisted in an advisory capacity by other interested groups of users.



# Overview of MEI Structure

In most cases, an MEI file, like many other representations, has a "header + message" structure. This is a commonly-occurring structure because it effectively separates metadata and data. In MEI these two parts of the file are called `<meihead>` and `<music>` and are contained within an `<mei>` element.

The `<meihead>` element contains metadata about the encoded data found in the `<music>` element. The header is modelled on the TEI `teiHeader`<sup>2</sup> element and therefore has the same components as in TEI – `<filedesc>`, `<encodingdesc>`, `<profiledesc>`, and `<revisiondesc>` – plus an `<meiid>` element. `<filedesc>` is required, but the remaining elements are optional.

The `<filedesc>` element describes the electronic file itself and the sources from which it was drawn. The `<encodingdesc>` element documents the purpose of the encoding and the methods used to create the file. A description of the non-bibliographic aspects of the creation of a work is provided for by the `<profiledesc>` element. These include, but are not limited to, the languages and sub-languages used in the work, the situation in which it was produced, the work's reception history, etc. The `<revisiondesc>` element provides a place to encode the revision history for the electronic file. One or more identifiers associated with the file may be captured using the `<meiid>` element.

The `<music>` element of the MEI file contains the actual encoded content. MEI is agnostic regarding the definition of the term *music* – it is simply the thing being encoded. It can be a monophonic song or a complex symphony – the character of the work is encoded by the `<music>` element's components. The underlying assumption, however, is that the music being encoded is or can be expressed in a *notated* form.

The `<music>` element allows `<front>`, `<body>`, and `<back>` components. Critical editions and collections of works often contain extensive text, such as a table of contents, an introduction, commentary, a biography, an index, etc. In addition to front and back matter, MEI can also encode the introductory or explanatory text sometimes found between sections of a musical work. Accommodating these kinds of text within MEI permits the encoding of music notation and prose in a single, comprehensive manner.

The `<body>` element encodes the musical content of the work. It contains one or more discrete, linear segments, called `<mdiv>` ("musical division"). An `<mdiv>` is the highest-level indication of the structure of the composition. For example, a single `<mdiv>` indicates a single-movement work; however, when a musical work can be broken into several top-level segments, the body element may contain multiple `<mdiv>` elements — movements in the case of a symphony, acts in the case of an opera, etc. In order to accommodate a more deeply nested structure, such as that found when an act of an opera is made up of scenes and scenes are divided into numbers, the `<mdiv>` element is recursively nest-able.

When the facsimile module is activated, the `<facsimile>` element is also allowed within `<music>`. `<facsimile>` contains a representation of a written source in the form of a set of images rather than as transcribed text. Multiple `<facsimile>` elements may be used when several sets of images are needed, for example, when there is more than one physical source. Within `<facsimile>`, image files may be referenced using `<graphic>` elements and areas of interest within the image may be indicated through the use of `<zone>` elements. Elements that mark semantic content may be linked to particular images or zones using the `fac` attribute, which is available when the facsimile module is activated.

An `<mdiv>` element may contain one or both of two possible views. The `<score>` element contains a traditional, full open score while the `<parts>` element contains each performer's view of the work. Score and parts views are intended to accommodate different methods of organizing the markup – no particular presentation is implied, and software may render a collection of parts as a score or a score as a collection of parts. The explicit encoding of two views is necessary because it is not always possible to automatically derive one view from the other. In addition, separating scores and parts can eliminate a great deal of markup complexity.

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<sup>2</sup> While TEI uses camel-case element names, MEI uses only lower-case names.

A <part> element contains an individual performer's view of the score, effectively a mini-score requiring all the encoding features of a full score. The encoding of individual parts is practical when they do not share visual characteristics, such as typeface or page layout, with the full score. <part> elements in MEI have little to do with voice leading, which can be encoded using the next attribute available on all musical event-like elements.

In both score and part views, the <scoredef> element and its sub-elements are used to describe logical characteristics of the encoded music, such as key signature, the "actual" key (as opposed to the notated key signature), meter, etc. and visual features, such as page size, staff groupings and labels, etc.

A <part> or <score> may be divided into linear segments or sections. <Section> elements often function as a scoping mechanism for clef signs, key and meter signatures, plus metronome, tempo, and expression markings. Their use minimizes the need for backward scanning to establish context when the starting point for access is not at the beginning of the score. <Section> elements may also be used for other user-defined analytical or editorial purposes and may be arbitrarily nested to any desired level. There is also an <ending> element, a specialized instance of the <section> element that may not be recursively nested.

Depending upon the time period of the notation and the encoder's needs, multiple methods of organization are possible in a <section> element. When the CMN module is "switched on", measure-by-measure encoding is allowed, with <staff> sub-elements within the measure. However, when the mensural or neumes module is enabled, staff-by-staff organization is expected, a historically appropriate approach for notation styles that do not have measures. In any case, layer sub-elements are expected within <staff>. *Note that it is possible to use both of these organization methods simultaneously by enabling more than one of the CMN, mensural, or neumes modules; however, this is considered an advanced topic and is not covered in this introduction.*

It is important to note that within the <layer> element, semantic events, not visual symbols, are modelled. Events are the typical, time-based, discrete atoms of musical data, such as notes, chords, rests, etc. While events may have visual properties, modelling symbols places too much emphasis on presentational qualities and makes the markup less generally useful as a generic music markup standard. However, when the encoder finds them necessary, visual properties may be recorded in attributes as "hints" for both human and software readers of the markup.

So-called "control events", such as dynamics, ties, phrase marks, pedal marks, etc., depend upon other events, such as notes or rests, for their existence. They often do not fit the principal hierarchy of sections, measures and staves. Neither can they always be treated as properties of other events. Therefore, a second class of events exists in MEI for these musical elements.

Additional document elements may be employed instead of the <mei> element. The <meicorpus> element can be employed to create a single file that contains multiple MEI instances or the <meihead> element can be used to create a "stand-alone" header; that is, an MEI instance that transmits only metadata without any accompanying music notation markup. Conversely, the <music> element may serve as the document element for a file that is expected to be inserted into another XML document, a TEI (Text Encoding Initiative) file for example, that already provides a context for the included material.

## Tag Library Conventions

The "MEI Elements" section of the tag library contains descriptions of 238 elements, arranged alphabetically by their tag names. The "Index by Element Name" section makes it possible to locate those elements with tag names that might be hard to find alphabetically. For example, the index entry "bowed tremolo" points to the tag name "<btrem>". The index also serves as a concise, easily browse-able list of all MEI elements.

The "MEI Elements" section presents information for each element as shown in Figure 1.

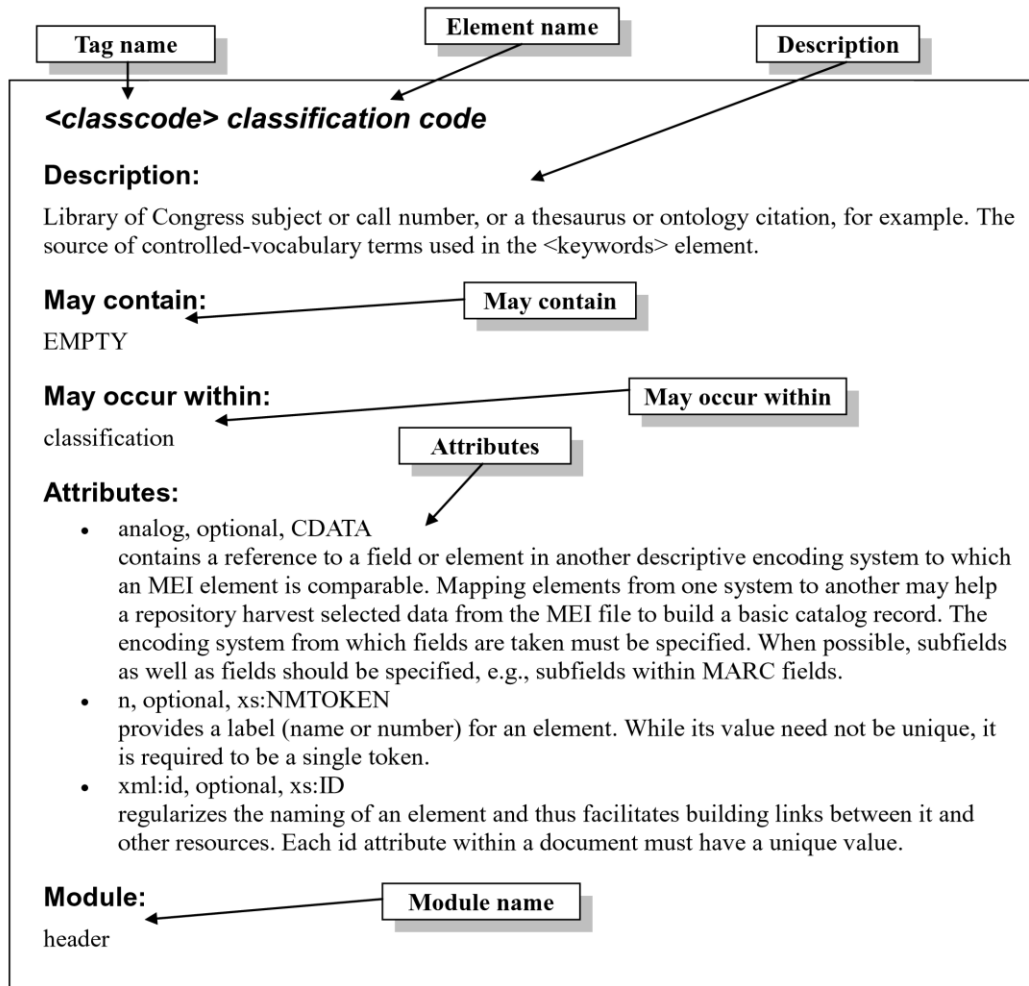


Figure 1

**Tag Name:** Short, mnemonic form of the element name that is used in the machine-readable XML document. The tag name is the first word at the top of the entry. Tag names appear between angle brackets, e.g., `<mei>`, except in the listings under "May contain" and "May occur within". They are always in lower case.

**Element Name:** Expanded version of the tag name that more fully describes the element's meaning. The full name of the element is usually a word or phrase that identifies the element's purpose. In the tag library, the element name follows the tag name.

**Description:** Definition of the element typically drawn from standard reference works, glossaries, basic dictionaries, and data dictionaries, such as Gardner Read's *Music Notation: A Manual of Modern Practice*,

Grove Music Online, Carl Parrish's Notation of Medieval Music, the Text Encoding Initiative Guidelines, the Encoded Archival Description Tag Library, etc. Additional text describes how the element is used, differentiates it from similar elements, points out useful attributes, provides an illustrative example, or directs the reader to related elements.

**May contain:** Identifies other elements that may occur within the element being defined. Elements may be empty (e.g., permit no element content); or they may contain text (called PCDATA), other elements, or a mixture of text and elements. The abbreviation PCDATA (parsed character data) indicates that text content is allowed directly inside the element, but the text cannot include characters that might be interpreted by an XML parser as action codes, such as left angle brackets. The list of permitted elements usually includes more elements than are generally needed because similar elements share the same content model. This practice eases the task of authoring a schema and aids machine processing of encoded documents.

**May occur within:** Identifies all the elements within which the described element may appear. This information conveys the sense of where and how often an element is available throughout the schema. Definitions of parent elements may provide additional information about an element's usage.

**Attributes:** Identifies all attributes associated with the element. Each entry in the list of attributes contains the attribute name, an indication of whether the attribute is optional or required, and the datatype to which a value is expected to conform.

**Module name:** Identifies the schema module in which the element is defined. In order to use the element, this module must be activated.

**Illustration:** Some elements have accompanying illustrative graphics.

# MEI Elements

## **<abbr> abbreviation**

### **Description:**

A generic element for a shortened form of a word, including an acronym. The type attribute may be used to classify the abbreviation according to some convenient typology. Sample values include: suspension - the abbreviation provides the first letter(s) of the word or phrase, omitting the remainder; contraction - the abbreviation omits some letter(s) in the middle; brevigraph - the abbreviation comprises a special symbol or mark; superscription - the abbreviation includes writing above the line; acronym - the abbreviation comprises the initial letters of the words of a phrase; title - the abbreviation is for a title of address (Dr, Ms, Mr, ...); organization - the abbreviation is for the name of an organization; geographic - the abbreviation is for a geographic name. This tag is the mirror image of the <expan> tag; both allow the encoder to transcribe both an abbreviation and its expansion. In <abbr>, however, the original is transcribed as the content of the element and the expansion as an attribute value; <expan> reverses this. The choice between the two is up to the user. The <abbr> tag is not required; if appropriate, the encoder may transcribe abbreviations in the source text silently, without tagging them. If abbreviations are not transcribed directly but expanded silently, then the MEI header should so indicate. The cert attribute signifies the degree of certainty ascribed to the expansion of the abbreviation. The expan attribute gives an expansion of the abbreviation. The resp attribute contains an ID reference to an element containing the name of the editor or transcriber responsible for supplying the expansion of the abbreviation. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

### **May occur within:**

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [choice](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

### **Attributes:**

- cert, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- evidence, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- expan, optional, CDATA  
records the expansion of the abbreviation.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.

- **hand**, optional, **xs:IDREF**  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **resp**, optional, **xs:IDREFS**  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **seq**, optional, **xs:positiveInteger**  
used to assign a sequence number related to the order in which the encoded features carrying this attribute are believed to have occurred.
- **source**, optional, **xs:IDREFS**  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **subtype**, optional, **xs:NMTOKEN**  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, **xs:NMTOKEN**  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## **<accessdesc> access description**

### Description:

Describes the conditions that affect the accessibility of material. May indicate the nature of restrictions or the lack of restrictions. Do not confuse this element with <userrestrict> (usage restrictions), which captures information about limitations on the use of material, such as those afforded by copyright. This element is modelled on an element in Encoded Archival Description (EAD).

### May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

### May occur within:

[availability](#)

## Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

## **<accid> accidental**

## Description:

Records a temporary alteration to the pitch of a note. An accidental may raise a pitch by one or two semitones or it may cancel a previous accidental or part of a key signature. This element provides an alternative to the *accid* and *accid.ges* attributes on the *<note>* element. The element should be used when specific display info, such as size or color, needs to be recorded for the accidental or when multiple accidentals occur on a single note. The *func* attribute can be used to differentiate between the accidental's functions, such as 'cautionary' or 'editorial'.

## May contain:

EMPTY

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

- **accid**, optional, xs:token, s, f, ss, x, ff, xs, tb, n, nf, ns, su, sd, fu, fd, nu, nd  
captures a written accidental.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.

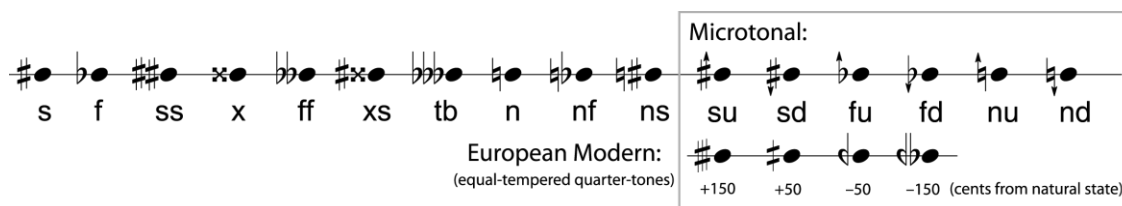
- **enclose**, optional, xs:token, paren, brack  
records the characters often used to mark accidentals, articulations, and sometimes notes as having a cautionary or editorial function. For an example of cautionary accidentals enclosed in parentheses, see Read, p. 131, ex. 9-14.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **fontfam**, optional, xs:token  
contains the name of a font-family.
- **fontname**, optional, xs:token  
records the name of the font.
- **fontsize**, optional, xs:decimal  
indicates the size of the font in printers' points, i.e., 1/72nd of an inch.
- **fontstyle**, optional, xs:token, ital, normal, oblique  
records the style of the font, i.e, italic, oblique, or normal.
- **fontweight**, optional, xs:token, bold  
used to indicate bold type.
- **func**, optional, xs:token, caution, edit  
records whether the accidental has an editorial or cautionary function.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **place**, optional, xs:token, above, below, staff  
captures the placement of the accidental relative to the staff.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

shared



## Illustration:



## <acqsource> acquisition source

### Description:

Post-publication source, such as a vendor or distributor, from which access to a bibliographic item may be obtained, including electronic access. This element is modelled on an element in Encoded Archival Description (EAD).

### May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

### May occur within:

[availability](#)

### Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### Module:

header

## **<add> addition**

### **Description:**

Marks an addition to the text. The add element contains material inserted by an author, scribe, annotator, or corrector. The agent responsible for the addition may be encoded using the hand attribute, while the resp attribute records the editor or transcriber responsible for identifying the hand of the addition. The cert attribute signifies the degree of certainty ascribed to the identification of the hand of the addition. The editor(s) responsible for asserting this particular reading may be recorded in the resp attribute. The value of resp must point to one or more identifiers declared in the document header. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

### **May occur within:**

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

### **Attributes:**

- cert, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- evidence, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- hand, optional, xs:IDREF  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- resp, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- seq, optional, xs:positiveInteger  
used to assign a sequence number related to the order in which the encoded features carrying this attribute are believed to have occurred.

- source, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

## <address> address

## Description:

Contains a postal address, for example of a publisher, an organization, or an individual. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[addressline](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [pubstmt](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## **<addressline> addressline**

### **Description:**

Single line of a postal address. This element may be repeated as many times as necessary to enter all lines of an address. This element is modelled on elements in Encoded Archival Description (EAD) and the Text Encoding Initiative (TEI).

### **May contain:**

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

### **May occur within:**

[address](#)

### **Attributes:**

- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### **Module:**

shared

## **<altmeiid> alternative MEI identifier**

### **Description:**

May contain a bibliographic identifier that does not fit within the `meihead id` attribute, for example because the id does not fit the definition of an XML id or because multiple identifiers are needed. One or the other of `<altmeiid>` or the `id` attribute on `<mei>` is required when applicable.

### **May contain:**

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

### **May occur within:**

[meihead](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- subtype, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- type, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

**<anchoredtext> anchored text**

## Description:

Container for text that is fixed to a particular location, regardless of changes made to the layout of the measures around it. This element may be used where semantic markup of the text is neither possible nor desirable, such as in optical music recognition (OMR) applications. The content model here is similar to paragraph without model.textcomponent and <pb> sub-elements. The starting point of the text may be identified in absolute output coordinate terms using the x and y attributes or relative to the location of another element using the startid attribute. The attributes in the att.visualoffset class may be used to record horizontal, vertical, or time offsets from the absolute coordinates or from the location of the referenced element.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[dir](#), [ending](#), [figdesc](#), [harm](#), [layer](#), [lem](#), [measure](#), [ossia](#), [pgdesc](#), [rdg](#), [score](#), [section](#), [staff](#), [syllable](#), [symboldef](#), [tempo](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.

- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.

## Module:

usersymbols

## <annot> annotation

### Description:

Provides a short statement explaining the text or indicating the basis for an assertion. It is used for both general comments and for an annotation of the musical text. <annot> provides a way to group participating \*events\* and/or \*control events\*, the notes that form a descending bass line or phrase marks, for example, and provide a label for or comment regarding the group. A list of event IDs may be given in the plist attribute. An editorial or analytical comment or observation, encoded elsewhere, such as in the front or back matter, in score text elements, or in an external document may be pointed to using the link.common, link.internal, or link.external attributes. Alternatively, the observation may be included directly within the <annot> element. The <annot> element, along with other elements with attributes from the att.link.external class, may also be used to link/synchronize elements within the MEI file to external media such as images or sound recordings. The ID of the MEI element(s) to be linked from should be encoded in the plist attribute while the link to the external media may be encoded in the href or entityref attributes or in the body of the annotation using <extref> or <extptr> elements. The starting point of the annotation may be indicated by either a tstamp, tstamp.ges, tstamp.real or startid attribute, while the ending point may be recorded by either a dur, dur.ges or endid attribute. The resp attribute records the editor(s) responsible for identifying or creating the annotation.

### May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [lg](#), [list](#), [name](#), [num](#), [orig](#), [p](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [style](#), [style](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

### May occur within:

[abbr](#), [add](#), [addressline](#), [annot](#), [bibl](#), [caption](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [ending](#), [expan](#), [extref](#), [figdesc](#), [geogname](#), [head](#), [identifier](#), [item](#), [l](#), [layer](#), [lem](#), [measure](#), [name](#), [notes](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgdesc](#), [rdg](#), [ref](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [stack](#), [staff](#), [style](#), [supplied](#), [syllable](#), [td](#), [th](#), [title](#), [unclear](#)

### Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corres, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- dur, optional, xs:token, "([0-9]+m \*|+ \*)?([0-9]+(\.?[0-9]\*)?)"  
encodes the duration of a feature as a timestamp for its endpoint rather than as a relative durational value.
- dur.ges, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- endid, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- entityref, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.

- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **targettype**, optional, xs:NMTOKEN  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xlink:actuate**, optional, xs:token, onLoad, onRequest, other, none  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the show attribute to determine link behavior.
- **xlink:href**, optional, xs:anyURI  
allows the use of an previously-undeclared URI to identify an external electronic object.
- **xlink:role**, optional, xs:anyURI  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms,



the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.

- `xlink:show`, optional, `xs:token`, new, replace, other, none  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- `xlink:title`, optional, CDATA  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### Module:

shared

### **<app> apparatus**

### Description:

Contains one or more alternative encodings. The alternatives may be thought of as exclusive or as parallel. The type attribute may contain any convenient descriptive word, describing the extent of the variation (e.g. note, phrase, measure, etc.), its text-critical significance (e.g. significant, accidental, unclear), or the nature of the variation or the principles required to understand it (e.g. lectio difficilior, usus auctoris, etc.). This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

[lem](#), [rdg](#)

### May occur within:

[beam](#), [ending](#), [fw](#), [ineume](#), [layer](#), [lem](#), [measure](#), [note](#), [ossia](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [score](#), [section](#), [staff](#), [syllable](#), [tuplet](#), [uneume](#)

### Attributes:

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `subtype`, optional, `xs:NMTOKEN`  
provide any sub-classification for the element, additional to that given by its type attribute.
- `type`, optional, `xs:NMTOKEN`  
characterizes the element in some sense, using any convenient classification scheme or typology.

- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

**Module:**

critapp

**<appinfo> application information**

**Description:**

Groups information about applications which have acted upon the MEI file. This is not to be confused with applications which were used to create the MEI file. The latter may be recorded in the projectdesc element. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[application](#)

**May occur within:**

[encodingdesc](#)

**Attributes:**

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

**Module:**

header

**<application> application**

**Description:**

Provides information about an application which has acted upon the current document. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[name](#), [p](#), [ptr](#)

**May occur within:**

[appinfo](#)

## Attributes:

- **enddate**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the end point of a date range.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **notafter**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains an upper boundary for an uncertain date.
- **notbefore**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains a lower boundary for an uncertain date.
- **reg**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
gives the value of a date in standard ISO form.
- **startdate**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the starting point of a date range.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **version**, optional, CDATA  
supplies a version number for an application, independent of its identifier or display name.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

## **<arpeg> arpeggiation**

## Description:

Indicates that the notes of a chord are to be performed successively rather than simultaneously, usually from lowest to highest. Sometimes called a "roll". The modern symbol is a vertical wavy line preceding the chord. When the notes of the chord are to be performed from highest to lowest, an arrowhead may be added to the lower end of the line. Even though it is redundant, an arrowhead is sometimes added to the upper end of the line for the sake of consistency or when the direction of successive arpeggios alternates. In music for keyboard instruments, sometimes a distinction is made between a single arpeggio in which both hands play successively and simultaneous arpeggios in two hands. In the case of the former, multiple values may be required in the staff and layer attributes. Arpeggios that do not cross staves, but still involve more than one layer require multiple values for the layer attribute.

## May contain:

EMPTY

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

- **arrow**, optional, xs:token, true, false  
may be used when an arrowhead is to be drawn as part of the arpeggiation symbol.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **order**, optional, xs:token, up, down, nonarp  
describes the direction in which the arpeggio is to be performed (up = lowest to highest, down = highest to lowest) or a return to a non-arpeggiated style (nonarp, usually rendered with a preceding bracket instead of a wavy line).
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.

- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `vo`, optional, `xs:decimal`  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- `x`, optional, `xs:decimal`  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `y`, optional, `xs:decimal`  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.

## Module:

cmn

## Illustration:



## <artic> articulation

### Description:

An indication of how to play a note or chord. Articulations typically affect duration, such as staccato marks, or the force of attack, such as accents. This element provides an alternative to the `artic` attributes on the `<note>` and `<chord>` elements. It should be used when specific display info, such as size or color, needs to be recorded for the articulation or when multiple articulation marks occur on a single note or chord.

### May contain:

EMPTY

### May occur within:

[add](#), [chord](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- `artic`, optional, list of `xs:token`, `acc`, `stacc`, `ten`, `stacciss`, `marc`, `marc-stacc`, `acc-marc`, `spicc`, `rip`, `doit`, `plop`, `fall`, `bend`, `flip`, `smear`, `dnbow`, `upbow`, `harm`, `snap`, `fingernail`, `ten_stacc`, `damp`, `dampall`, `open`, `stop`, `dbl tongue`, `trpl tongue`, `heel`, `toe`, `tap`, `lhpizz`, `dot`, `stroke`, minimum length of 1  
encodes the written articulation(s). Articulations are normally encoded in order from the notehead outward; that is, away from the stem. See additional notes at `att.vis.note`. Only articulations should be encoded in the `artic` attribute; fingerings should be encoded using the `<dir>` element.

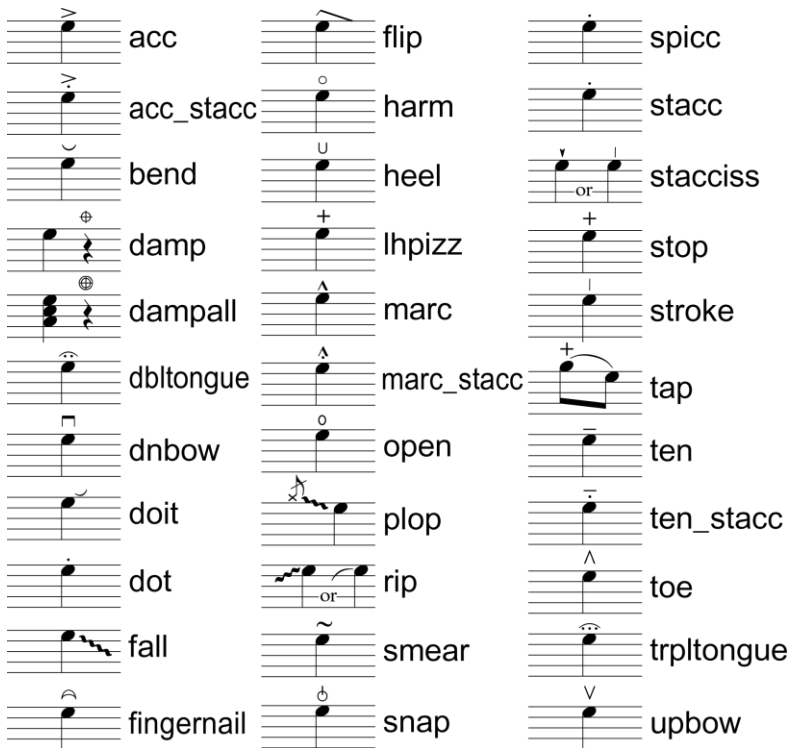
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **enclose**, optional, xs:token, paren, brack  
records the characters often used to mark accidentals, articulations, and sometimes notes as having a cautionary or editorial function. For an example of cautionary accidentals enclosed in parentheses, see Read, p. 131, ex. 9-14.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **fontfam**, optional, xs:token  
contains the name of a font-family.
- **fontname**, optional, xs:token  
records the name of the font.
- **fontsize**, optional, xs:decimal  
indicates the size of the font in printers' points, i.e., 1/72nd of an inch.
- **fontstyle**, optional, xs:token, ital, normal, oblique  
records the style of the font, i.e, italic, oblique, or normal.
- **fontweight**, optional, xs:token, bold  
used to indicate bold type.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **place**, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `y`, optional, `xs:decimal`  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.

## Module:

shared

## Illustration:



## <availability> availability

### Description:

Groups elements that describe the availability of and access to a bibliographic item. When used within the `filedesc` element, `availability` indicates access to the MEI-encoded document itself. This element is modelled on an element in Encoded Archival Description (EAD).

### May contain:

[accessdesc](#), [acqsource](#), [price](#), [sysreq](#), [userrestrict](#)

### May occur within:

[pubstmt](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

header

**<back> back**

**Description:**

Back matter such as indexes, advertisements, etc. following the main part of a text. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[div](#), [lb](#), [pb](#)

**May occur within:**

[music](#)

**Attributes:**

- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

text



## <barline> barline

### Description:

Vertical line drawn through one or more staves that divides musical notation into metrical units. This element is provided for repertoires, such as mensural notation, that lack measures. Because the barline element's attributes, from which the logical and visual characteristics of the barline can be discerned, largely duplicate those of measure, the use of barline is not necessary within measure elements in CMN.

### May contain:

EMPTY

### May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

### Attributes:

- **barplace**, optional, xs:token, mensur, staff, takt  
records the location of a barline.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **complete**, optional, xs:token, c, i, o  
a value of 'c' (complete) indicates a metrically complete measure, 'i' (incomplete) indicates a measure with not enough beats, while 'o' (overfull) is for measures with too many beats.
- **control**, optional, xs:token, true, false  
indicates whether or not a barline is "controlling"; that is, if it indicates a point of alignment across all the parts. Barlines within a score are usually controlling; that is, they "line up". Barlines within parts may or may not be controlling. When applied to <measure>, this attribute indicates the nature of the right barline but not the left.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **entityref**, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.

- `rend`, optional, `xs:token`, `dashed`, `dotted`, `dbl`, `dbldashed`, `dbldotted`, `end`, `invis`, `rptstart`, `rptboth`, `rptend`, `single`  
records the appearance of the barline.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `taktplace`, optional, `xs:nonNegativeInteger`  
If takt barlines are to be used, then the `taktplace` attribute may be used to denote the staff location of the shortened barline. The location may include staff lines, spaces, and the spaces directly above and below the staff. The value ranges between 0 (just below the staff) to 2 \* number of staff lines (directly above the staff). For example, on a 5-line staff the lines would be numbered 1,3,5,7, and 9 while the spaces would be numbered 0,2,4,6,8,10. For example, a value of '9' puts the barline through the top line of a 5-line staff.
- `targettype`, optional, `xs:NMTOKEN`  
in contrast with the `role` attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- `tstamp`, optional, `xs:decimal`, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- `unit`, optional, `xs:NMTOKEN`  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- `width`, optional, `xs:decimal`  
measurement of the horizontal dimension of an entity. For example, some music printing systems rely on measure width data for rendering. The `width` attribute may be used to capture this data for interchange with these systems.
- `xlink:actuate`, optional, `xs:token`, `onLoad`, `onRequest`, `other`, `none`  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the `show` attribute to determine link behavior.
- `xlink:href`, optional, `xs:anyURI`  
allows the use of an previously-undeclared URI to identify an external electronic object.
- `xlink:role`, optional, `xs:anyURI`  
indicates a property of the entire link. The value of the `role` attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.
- `xlink:show`, optional, `xs:token`, `new`, `replace`, `other`, `none`  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- `xlink:title`, optional, `CDATA`  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each `id` attribute within a document must have a unique value.

## Module:

shared

## Illustration:



## <barre> barre

## Description:

An indication of fingering in a chord tablature grid. The startid and endid attributes are used to indicate the <chordmember> elements on which the barre starts and finishes respectively. The fret at which the barre should be created is recorded by the fret attribute.

## May contain:

EMPTY

## May occur within:

[chorddef](#)

## Attributes:

- endid, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- fret, optional, xs:positiveInteger, 1 - 5  
records the location at which a string should be stopped against a fret.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- startid, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

harmony

## <beam> beam

## Description:

A container for a series of explicitly beamed events that begins and ends entirely within a measure. For beams that cross the barline, use the beamspan element. Secondary beams may be broken explicitly using the breaksec attribute on the notes or chords under the beam. Automated beaming, as opposed to explicitly marked beams, may be indicated for an entire score, part or section by using the beam.group and beam.rests attributes on these elements.

## May contain:

[add](#), [app](#), [barline](#), [beam](#), [beatrpt](#), [bend](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corr](#), [custos](#), [damage](#), [del](#), [ftrem](#), [gap](#), [gliss](#), [halfmrpt](#), [handshift](#), [keysig](#), [ligature](#), [mensur](#), [note](#), [orig](#), [pad](#), [proport](#), [reg](#), [rest](#), [restore](#), [sic](#), [space](#), [subst](#), [supplied](#), [tuplet](#), [unclear](#)

## May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

## Attributes:

- **beam.with**, optional, xs:token, above, below  
In the case of cross-staff beams, the with attribute is used to indicate which staff the beam is connected to; that is, the staff above or the staff below.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **rend**, optional, xs:token, acc, rit, norm  
captures whether a beam is feathered and in which direction: 'acc' indicates that the secondary beams get progressively closer together, coming together at the end of the beam, while 'rit' means that the secondary beams start at the same point and get progressively more distant.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **slope**, optional, xs:decimal  
records the slope of the beam.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

cmn

## Illustration:



## **<beamspan> beam span**

### Description:

Alternative element for explicitly encoding beams which extend across barlines. The starting point of the beam may be indicated by either a `tstamp`, `tstamp.ges`, `tstamp.real` or `startid` attribute, while the ending point may be recorded by either a `dur`, `dur.ges` or `endid` attribute. It is a semantic error not to specify one starting and one ending type of attribute.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

- **beam.with**, optional, xs:token, above, below  
In the case of cross-staff beams, the with attribute is used to indicate which staff the beam is connected to; that is, the staff above or the staff below.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **dur**, optional, xs:token, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
records the duration of a feature using the relative durational values provided by the data.DURATION datatype.
- **dur.ges**, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **endid**, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **rend**, optional, xs:token, acc, rit, norm  
captures whether a beam is feathered and in which direction: 'acc' indicates that the secondary beams get progressively closer together, coming together at the end of the beam, while 'rit' means that the secondary beams start at the same point and get progressively more distant.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **slope**, optional, xs:decimal  
records the slope of the beam.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]

- `tstamp.ges`, optional, `xs:nonNegativeInteger`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn

## **<beatrpt> *beat repeat***

## Description:

An indication that material on a preceding beat should be repeated. It is also used in guitar or rhythm parts to indicate where chord changes occur. When these parts require durations longer or shorter than a beat, however, note elements with appropriately-shaped note heads should be employed.

## May contain:

EMPTY

## May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

## Attributes:

- `altsym`, optional, `xs:IDREF`  
provides a way of pointing to a user-defined symbol. It must contain an ID of a `<symboldef>` element elsewhere in the document.
- `color`, optional, `xs:token`, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `expand`, optional, `xs:token`, true, false  
indicates whether to render a repeat symbol or the source material to which it refers.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `layer`, optional, `xs:positiveInteger`  
identifies the layer to which a feature applies.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- rend, required, xs:positiveInteger, xs:token  
indicates the number of slashes required to render the appropriate beat repeat symbol. When a single beat is repeated, consisting of a single note or chord, it is indicated by a single thick, slanting slash; therefore, the value '1' should be used. The following values should be used when the beat is divided into even notes: 4ths or 8ths=1, 16ths=2, 32nds=3, 64ths=4, 128ths=5. When the beat is comprised of mixed duration values, the symbol is always rendered as 2 slashes and 2 dots.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn



## Illustration:



## <bend> bend

### Description:

A variation in pitch (often microtonal) upwards or downwards during the course of a note. Typically, the performer attacks the note at "true" pitch, bends the intonation, then returns to true pitch. The bend element can also be used for scoop, plop, falloff, and doit performance effects. It should *\*not\** be used for l.v. (laissez vibrer) indications. Precise performance data that differs from the logical events in a measure may be recorded within the bend element. The starting point of the bend may be indicated by either a *tstamp*, *tstamp.ges*, *tstamp.real* or *startid* attribute. It is a semantic error not to specify a starting attribute.

### May contain:

[note](#), [rest](#), [tuplet](#)

### May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

### Attributes:

- *amount*, optional, xs:decimal, xs:token  
records the amount of detuning. The decimal values should be rendered as a fraction (or an integer plus a fraction) along with the bend symbol.
- *bezier*, optional, list of xs:integer, minimum length of 1  
records the placement of Bezier control points as a series of space-separated xy coordinates, eg. 19 45 - 32 118.
- *bulge*, optional, list of xs:decimal, minimum length of 1  
describes a curve as a set of distance values above or below an imaginary line connecting the endpoints of the curve. The bulge attribute must contain one or more decimal values expressed in inter-line units.
- *color*, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"

used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- curvedir, optional, xs:token, above, below  
describes a curve with a generic term indicating whether the curve bows upward or downward. Upward curves go above the items they cover, while downward curves go under them.
- endho, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined end point.
- endid, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- endto, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- endvo, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined end point.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- ho, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- layer, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- plist, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- rend, optional, xs:token, medium, wide, dashed, dotted  
records the appearance of the curve.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- startho, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- startid, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- startto, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- startvo, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined start point.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.

- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac** attribute.
- **x2**, optional, xs:decimal  
encodes the optional 2nd x coordinate.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac** attribute.
- **y2**, optional, xs:decimal  
encodes the optional 2nd y coordinate.

## Module:

cmn

## Illustration:



## **<bibl> bibliographic reference**

### Description:

Provides a citation for a published work. **<bibref>** may contain a mix of text and more specific elements such as **<title>**, **<edition>**, **<persname>**, and **<corpname>**. This element may also function as a hypertext reference to an external electronic resource. Do not confuse this element with **<ref>**, which is an internal link from one place in the MEI document to another place in the same document.

## May contain:

PCDATA, [abbr](#), [address](#), [annot](#), [bibl](#), [corpname](#), [date](#), [edition](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [blockquote](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- `entityref`, optional, `xs:ENTITY`  
uses a previously-declared entity to identify an external electronic object.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `targettype`, optional, `xs:NMTOKEN`  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- `xlink:actuate`, optional, `xs:token`, `onLoad`, `onRequest`, `other`, `none`  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the `show` attribute to determine link behavior.
- `xlink:href`, optional, `xs:anyURI`  
allows the use of an previously-undeclared URI to identify an external electronic object.
- `xlink:role`, optional, `xs:anyURI`  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.
- `xlink:show`, optional, `xs:token`, `new`, `replace`, `other`, `none`  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- `xlink:title`, optional, `CDATA`  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a

corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

shared

**<blockquote> blockquote****Description:**

A formatting element that designates an extended quotation; that is, a passage attributed to a source external to the text. The quotation is normally set off from the text by spacing or other typographic distinction. The source for the quote may be included in the optional <bibl> sub-element. Use <rend> for words that are enclosed in quotation marks for emphasis or for a short quoted phrase that occurs within a line of text. This element is modelled on an element in HTML.

**May contain:**

[bibl](#), [blockquote](#), [lg](#), [list](#), [p](#), [table](#)

**May occur within:**

[annot](#), [blockquote](#), [creation](#), [div](#), [figdesc](#), [fw](#), [item](#), [lem](#), [p](#), [pgdesc](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [td](#), [th](#), [titlepage](#)

**Attributes:**

- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.

**Module:**

text

## **<body> *body***

### **Description:**

This element contains the actual music data of the MEI encoding, as opposed to the header, front, and back elements, which do not. When the music can be broken into high-level, discrete, linear segments, such as movements of a symphony, there may be multiple <mdiv> elements within this element. This is the highest level indication of the structure of the music. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[mdiv](#)

### **May occur within:**

[music](#)

### **Attributes:**

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

shared

## **<breath> *breath mark***

### **Description:**

A indication of a point at which the performer on an instrument requiring breath (including the voice) may breathe. It also may indicate a short pause or break for instruments \*not\* requiring breath. Therefore, it often functions as a guide to phrasing. The usual sign for the breath mark is a comma; however, other visual forms of the breath mark may be indicated using the altsym attribute. The starting point of the breath mark may be indicated by either a tstamp, tstamp.ges, tstamp.real or startid attribute. It is a semantic error not to specify a starting point attribute.

### **May contain:**

EMPTY

### **May occur within:**

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### **Attributes:**

- altsym, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.

- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- endid, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- ho, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- layer, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- place, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- plist, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- startid, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- to, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.

- vo, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

cmn

## Illustration:



## <btrem> bowed tremolo

## Description:

A rapid alternation on a single pitch or chord. This element should also be used for wind double and triple tonguing and for flutter tonguing when these are expressed as tremolandi. For alternation between a pair of notes or chords, use the ftrem element. The num attribute can be used to store a number to be rendered along with a tremolo. The slash attribute indicates the number of slashes to be drawn. The number of slashes indicates the exact note values in an aural rendition of measured tremolandi, i.e., 4ths or 8ths=1, 16ths=2, 32nds=3, 64ths=4, 128ths=5, 256ths=6. See Read, p. 393-394. The stem modifier (slash or z) must also be explicitly set on the child <note> or <chord> element for a complete visual representation. See Read, p. 394, ex. 23-21, line 5.

## May contain:

[chord](#), [note](#)

## May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.



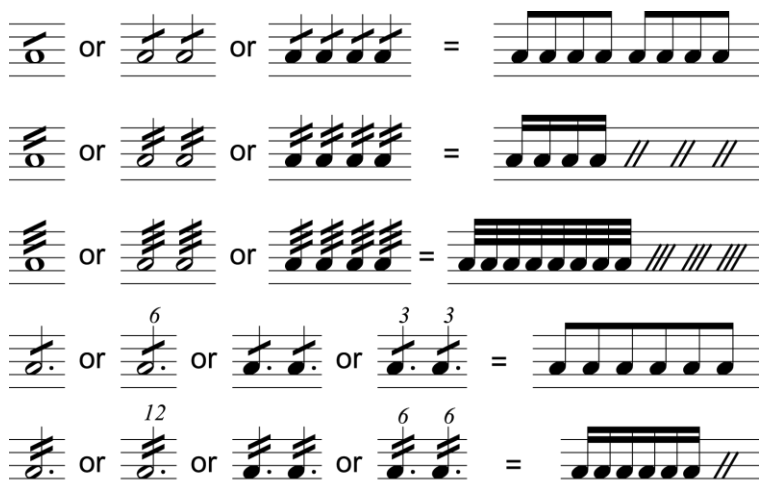
- `form`, optional, `xs:token`, `meas`, `unmeas`  
describes the bowed tremolo as measured or unmeasured.
- `layer`, optional, `xs:positiveInteger`  
identifies the layer to which a feature applies.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `next`, optional, `xs:IDREFS`  
used to point to the next event(s) in a user-defined collection.
- `num`, optional, `xs:positiveInteger`  
used to store a number to be rendered along with a feature.
- `num.place`, optional, `xs:token`, `above`, `below`  
states where the tuplet number will be placed in relation to the noteheads.
- `num.visible`, optional, `xs:token`, `true`, `false`  
determines if the tuplet number is visible.
- `prev`, optional, `xs:IDREFS`  
points to the previous event(s) in a user-defined collection.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `slash`, optional, `xs:positiveInteger`, 1 - 6  
indicates the number of slashes to be rendered along with the feature.
- `staff`, optional, list of `xs:positiveInteger`, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `tstamp`, optional, `xs:decimal`, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- `tstamp.ges`, optional, `xs:nonNegativeInteger`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn

## Illustration:





## <caption> caption

### Description:

A label which accompanies an illustration or a table.

### May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

### May occur within:

[fig](#), [table](#)

### Attributes:

- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### Module:

shared

## **<cc> control change**

### **Description:**

MIDI parameter/control change. The num attribute specifies parameter number, while val contains the parameter value. Each must fall in the range 0-127.

### **May contain:**

EMPTY

### **May occur within:**

[midi](#)

### **Attributes:**

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, required, xs:nonNegativeInteger, 0 - 127  
records a MIDI number.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- val, optional, xs:nonNegativeInteger, 0 - 127  
captures a MIDI value.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

midi

## **<chan> channel**

### **Description:**

MIDI channel assignment.

### **May contain:**

EMPTY

### **May occur within:**

[midi](#)

### **Attributes:**

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, required, xs:positiveInteger, 0 - 16  
records a MIDI channel value. The value must be in the range 1-16.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

midi

## **<change> change**

### **Description:**

Individual change within the revision description. Additions, deletions, and significant recoding should be noted, but not correction of minor typographical errors. It is recommended that revisions should be entered in reverse chronological order, with the most recent <change> first. The resp attribute contains a pointer to an element containing info about the person/entity responsible for change. The edition element can be used to designate an MEI encoding that has been so substantively changed that it constitutes a new version that supersedes earlier versions. This element is modelled on an element in Encoded Archival Description (EAD).

### **May contain:**

[changedesc](#), [date](#), [respstmt](#)

### **May occur within:**

[revisiondesc](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

header

## **<changedesc> change description**

### **Description:**

Description of a revision of the MEI file.

### **May contain:**

[p](#)

### **May occur within:**

[change](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

header

**<chanpr> *channel pressure***

**Description:**

MIDI channel pressure/after touch. The value of the num attribute must be in the range 0-127.

**May contain:**

EMPTY

**May occur within:**

[midi](#)

**Attributes:**

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, required, xs:nonNegativeInteger, 0 - 127  
records a MIDI number.

- `prev`, optional, `xs:IDREFS`  
points to the previous event(s) in a user-defined collection.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `staff`, required, list of `xs:positiveInteger`, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `tstamp`, optional, `xs:decimal`, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

midi

## <choice> choice

## Description:

Groups a number of alternative encodings for the same point in a text. Because the children of a choice element all represent alternative ways of encoding the same sequence, it is natural to think of them as mutually exclusive. However, there may be cases where a full representation of a text requires the alternative encodings to be considered as parallel. Note also that choice elements may be recursively nested. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[abbr](#), [choice](#), [corr](#), [expan](#), [orig](#), [reg](#), [sic](#), [unclear](#)

## May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [choice](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

## Attributes:

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

edittrans

## <chord> chord

### Description:

A simultaneous sounding of two or more notes in the same layer \*with the same duration\*.

### May contain:

[artic](#), [note](#)

### May occur within:

[add](#), [beam](#), [btrem](#), [corr](#), [damage](#), [del](#), [ftrem](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

### Attributes:

- **altsym**, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- **artic**, optional, list of xs:token, acc, stacc, ten, stacciss, marc, marc-stacc, acc-marc, spicc, rip, doit, plop, fall, bend, flip, smear, dnbow, upbow, harm, snap, fingernail, ten\_stacc, damp, dampall, open, stop, dbltongue, trpltongue, heel, toe, tap, lhpizz, dot, stroke, minimum length of 1  
encodes the written articulation(s). Articulations are normally encoded in order from the notehead outward; that is, away from the stem. See additional notes at att.vis.note. Only articulations should be encoded in the artic attribute; fingerings should be encoded using the <dir> element.
- **artic.ges**, optional, list of xs:token, acc, stacc, ten, stacciss, marc, marc-stacc, acc-marc, spicc, rip, doit, plop, fall, bend, flip, smear, dnbow, upbow, harm, snap, fingernail, ten\_stacc, damp, dampall, open, stop, dbltongue, trpltongue, heel, toe, tap, lhpizz, dot, stroke, minimum length of 1  
records performed articulation that differs from the written value.
- **beam**, optional, list of xs:token, "[i|m|t][1-6]", minimum length of 1  
indicates that this event is "under a beam".
- **breaksec**, optional, xs:positiveInteger  
presence of this attribute indicates that the secondary beam should be broken following this note/chord. The value of the attribute records the number of beams which should remain unbroken.
- **cluster**, optional, xs:token, whbox, blbox  
indicates an alternative notehead should be displayed instead of individual noteheads. See Read, p. 320-321, re: tone clusters.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **dots**, optional, xs:nonNegativeInteger, 0 - 4  
records the number of augmentation dots required by a dotted duration.
- **dur**, optional, xs:token, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
records the duration of a feature using the relative durational values provided by the data.DURATION datatype.



- **dur.ges**, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **fermata**, optional, xs:token, above, below, within  
indicates the attachment of a fermata to this element. If visual information about the fermata needs to be recorded, then a <fermata> element should be employed instead.
- **grace**, optional, xs:token, acc, unacc, unknown  
marks a note or chord as a "grace" (without a definitive written duration) and records from which other note/chord it should "steal" time.
- **grace.time**, optional, xs:token, "[0-9]+(\.[0-9]\*)?%"  
records the amount of time to be "stolen" from a non-grace note/chord.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **instr**, optional, xs:IDREF  
provides a way of pointing to a MIDI instrument definition. It must contain the ID of an <instrdef> element elsewhere in the document.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **lv**, optional, xs:token, true, false  
indicates the attachment of an l.v. (laissez vibrer) sign to this element.
- **mfunc**, optional, xs:NMTOKEN  
describes melodic function in any convenient typology.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **size**, optional, xs:token, normal, cue  
describes the relative size of a feature.
- **slur**, optional, list of xs:token, "[i|m|t][1-6]", minimum length of 1  
indicates that this element participates in a slur.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **stem.dir**, optional, xs:token, up, down  
describes the direction of a stem.
- **stem.len**, optional, xs:decimal  
encodes the stem length.
- **stem.mod**, optional, xs:token, 1slash, 2slash, 3slash, 4slash, 5slash, 6slash, sprech, z  
encodes any stem "modifiers"; that is, symbols rendered on the stem, such as tremolo or Sprechstimme indicators.
- **stem.pos**, optional, xs:token, left, right, center  
records the position of the stem in relation to the notehead(s).

- `stem.with`, optional, `xs:token`, above, below  
contains an indication of which staff a note or chord that logically belongs to the current staff should be visually placed on; that is, the one above or the one below.
- `stem.x`, optional, `xs:decimal`  
records the output x coordinate of the stem's attachment point.
- `stem.y`, optional, `xs:decimal`  
records the output y coordinate of the stem's attachment point.
- `syl`, optional, `CDATA`  
holds an associated sung text syllable.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `tie`, optional, `xs:token`, "[i|m|t]"  
indicates that this element participates in a tie. If visual information about the tie needs to be recorded, then a `<tie>` element should be employed.
- `to`, optional, `xs:decimal`  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- `tstamp`, optional, `xs:decimal`, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- `tstamp.ges`, optional, `xs:nonNegativeInteger`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tuplet`, optional, list of `xs:token`, "[i|m|t][1-6]", minimum length of 1  
indicates that this feature participates in a tuplet.
- `visible`, optional, `xs:token`, true, false  
indicates if a feature should be rendered when the notation is presented graphically or sounded.
- `x`, optional, `xs:decimal`  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `facts` attribute.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `y`, optional, `xs:decimal`  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `facts` attribute.

## Module:

shared

## Illustration:



## **<chorddef> chord definition**

### **Description:**

Chord tablature definition. An id attribute, while not required by the schema, is needed so that <harm> elements can reference a particular chord definition. The pos (position) attribute is provided in order to create displayable chord tablature grids. <chordmember> sub-elements record the individual pitches of the chord. <barre>sub-elements may be used when a single finger is used to stop multiple strings.

### **May contain:**

[barre](#), [chordmember](#)

### **May occur within:**

[chordtable](#)

### **Attributes:**

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- pos, optional, CDATA  
records the fret position at which the chord tablature is to be played.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

harmony

## **<chordmember> chord member**

### **Description:**

An individual pitch in a chord defined by a <chorddef> element. The fing and fret attributes are provided in order to create displayable chord tablature grids. The inth (harmonic interval) attribute may be used to facilitate automated performance of a chord. It gives the number of 1/2 steps above the bass. Of course, for the bass note itself, inth should be set to '0'. The fret at which a finger should be placed is recorded in the fret attribute.

### **May contain:**

EMPTY

### **May occur within:**

[chorddef](#)

### **Attributes:**

- accid.ges, optional, xs:token, s, f, ss, ff, n  
records the performed pitch inflection when it differs from the written accidental.

- `fing`, optional, `xs:positiveInteger`, `xs:token`  
indicates which finger, if any, should be used to play an individual string. The values 'x' and 'o' indicated stopped and open strings, respectively.
- `fret`, optional, `xs:positiveInteger`, 1 - 5  
records the location at which a string should be stopped against a fret.
- `inth`, optional, `xs:NMTOKENS`  
encodes the harmonic interval between this note and other pitches occurring at the same time.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `oct`, optional, `xs:nonNegativeInteger`, 0 - 9  
captures written octave information.
- `pname`, optional, `xs:token`, "[a-g]"  
contains a written pitch name.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

harmony

### **<chordtable> chord table**

### Description:

Chord/tablature look-up table. A table may be shared between MEI instances through the use of an external parsed entity containing the look-up table to be shared.

### May contain:

[chorddef](#)

### May occur within:

[scoredef](#)

### Attributes:

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

harmony

## **<classcode> *classification code***

### **Description:**

Library of Congress subject or call number, or a thesaurus or ontology citation, for example. The source of controlled-vocabulary terms used in the <keywords> element.

### **May contain:**

EMPTY

### **May occur within:**

[classification](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

header

## **<classification> *classification***

### **Description:**

Groups information which describes the nature or topic of a musical work. Although use of names and terms from locally controlled vocabularies is possible, terms used here should come from standard national or international vocabularies whenever they are available in order to enable searches in systems that include multiple MEI documents, or MEI documents and bibliographic records from many institutions.

### **May contain:**

[classcode](#), [keywords](#)

### **May occur within:**

[profiledesc](#), [source](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI

element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

## **<clef> clef**

## Description:

Indication of the exact location of a particular note on the staff and, therefore, the other notes as well. This element provides an alternative to the staff element's clef.\* attributes. It should be used when specific display info, such as size or color, needs to be recorded for the clef or when multiple, simultaneous clefs occur on a single staff.

## May contain:

EMPTY

## May occur within:

[clefchange](#), [staffdef](#)

## Attributes:

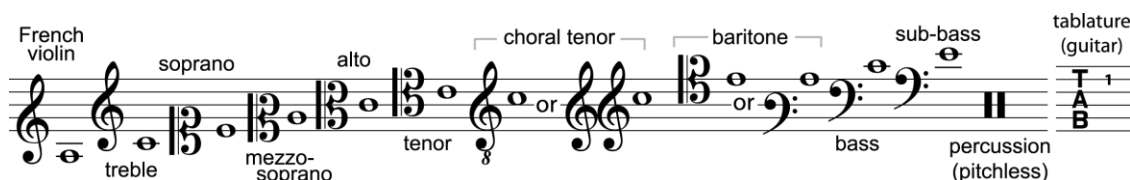
- altsym, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- dis, optional, xs:positiveInteger, "([\\-+]?[0-9]+) & (8|15|22)"  
records the amount of octave displacement.
- dis.place, optional, xs:token, above, below  
records the direction of octave displacement.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.

- line, optional, xs:positiveInteger  
indicates the line upon which a feature stands. The value must be in the range between 1 and the number of lines on the staff.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- oct, optional, xs:nonNegativeInteger, 0 - 9  
captures written octave information.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- shape, optional, xs:token, G, GG, F, C, perc, TAB  
describes a clef's shape.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## Illustration:



## <clefchange> clef change

## Description:

A temporary change of clef.

## May contain:

[clef](#)

## May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

## Attributes:

- **altsym**, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **dis**, optional, xs:positiveInteger, "([\\-+]?[0-9]+) & (8|15|22)"  
records the amount of octave displacement.
- **dis.place**, optional, xs:token, above, below  
records the direction of octave displacement.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **line**, optional, xs:positiveInteger  
indicates the line upon which a feature stands. The value must be in the range between 1 and the number of lines on the staff.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **oct**, optional, xs:nonNegativeInteger, 0 - 9  
captures written octave information.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **shape**, optional, xs:token, G, GG, F, C, perc, TAB  
describes a clef's shape.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.



- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## **<condition> condition**

## Description:

The physical condition of an item, particularly any variances between the physical makeup of the item and that of other copies of the same item (e.g., missing pages, plates, etc.). Condition may reflect other aspects of the physical condition of the item as well (e.g., brittleness, faded images, etc.). This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[physdesc](#)

## Attributes:

- `analog`, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

## **<corpname> corporate name**

### **Description:**

Identifies an organization or group of people that acts as a single entity. Examples include names of associations, institutions, business firms, non-profit enterprises, governments, government agencies, projects, programs, religious bodies, churches, conferences, athletic contests, exhibitions, expeditions, fairs, and ships. Secondary name parts may be encoded in <corpname> sub-elements. The name of the list from which a controlled value is taken may be recorded using the authority attribute. This element is modelled on an element in Encoded Archival Description (EAD).

### **May contain:**

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

### **May occur within:**

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [respstmt](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- authority, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- cert, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- dbkey, optional, xs:NMTOKEN  
used to record a value which serves as a primary key in an external database.
- enddate, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the end point of a date range.
- evidence, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- **notafter**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains an upper boundary for an uncertain date.
- **notbefore**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains a lower boundary for an uncertain date.
- **nymref**, optional, xs:IDREF  
used to record a pointer to the regularized form of the name.
- **reg**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
gives the value of a date in standard ISO form.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **role**, optional, CDATA  
used to specify further information about the entity referenced by this name, for example, the occupation of a person or the status of a place.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **startdate**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the starting point of a date range.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

namesdates

## **<corr> correction**

## Description:

Contains the correct form of an apparent erroneous passage. The **cert** attribute signifies the degree of certainty ascribed to correction. The **resp** attribute contains an ID reference to an element containing the name of the editor or transcriber responsible for suggesting the correction held as the content of the <corr> element. If the correction was made in the source, **resp** should be used to identify the hand of the corrector. The value of **resp** must point to one or more identifiers declared in the document header. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

## May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [choice](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

## Attributes:

- cert, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- evidence, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- hand, optional, xs:IDREF  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- resp, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- seq, optional, xs:positiveInteger  
used to assign a sequence number related to the order in which the encoded features carrying this attribute are believed to have occurred.
- source, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

## **<correction> correction**

### **Description:**

States how and under what circumstances corrections have been made in the text. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[p](#)

### **May occur within:**

[editorialdecl](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- corrlevel, optional, xs:token, high, medium, low, unknown  
indicates the degree of correction applied to the text.
- method, optional, xs:token, silent, tags  
indicates the method employed to mark corrections and normalizations.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### **Module:**

header

## **<creation> creation**

### **Description:**

Non-bibliographic creation details for the work being encoded, in narrative form. Contains phrases describing the origin of the text, e.g. the date, place, and circumstances of its composition. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[blockquote](#), [lg](#), [list](#), [p](#), [table](#)

**May occur within:**

[profiledesc](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

header

**<cue> cue**

**Description:**

MIDI cue point.

**May contain:**

EMPTY

**May occur within:**

[midi](#)

**Attributes:**

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.

- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

midi

## **<curve> curve**

## Description:

A curved line that cannot be represented by a more specific element, such as a <slur>. The starting point of the curve may be identified in absolute output coordinate terms using the x1 and y1 attributes or relative to the location of another element using the startid attribute. The attributes in the att.visualoffset class may be used to record horizontal, vertical, or time offsets from the absolute coordinates or from the location of the referenced element. Similarly, the terminal point of the curve may be recorded using either the x2,y2 coordinates or in relation to the location of another element using the endid attribute. Attributes in the att.visualoffset2 class maybe used to record the offsets of the ending point. The bulge attribute or, alternatively, the bezier attribute, describes the shape of the curve. The bulge attribute describes the curve as a set of distance values above or below an imaginary line connecting the endpoints of the curve while the bezier attribute records the placement of Bezier control points as a series of space-separated xy coordinate pairs, eg. 19 45 -32 118. The bulge attribute must contain one or more values of the NUMBER datatype. The rend attribute captures the appearance of the curve.

## May contain:

EMPTY

## May occur within:

[dir](#), [ending](#), [figdesc](#), [harm](#), [layer](#), [lem](#), [measure](#), [ossia](#), [pgdesc](#), [rdg](#), [score](#), [section](#), [staff](#), [syllable](#), [symboldef](#), [tempo](#)

## Attributes:

- **bezier**, optional, list of xs:integer, minimum length of 1  
records the placement of Bezier control points as a series of space-separated xy coordinates, eg. 19 45 - 32 118.
- **bulge**, optional, list of xs:decimal, minimum length of 1  
describes a curve as a set of distance values above or below an imaginary line connecting the endpoints of the curve. The bulge attribute must contain one or more decimal values expressed in inter-line units.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **curvedir**, optional, xs:token, above, below  
describes a curve with a generic term indicating whether the curve bows upward or downward. Upward curves go above the items they cover, while downward curves go under them.
- **endho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined end point.
- **endid**, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- **endto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- **endvo**, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined end point.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **rend**, optional, xs:token, medium, wide, dashed, dotted  
records the appearance of the curve.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **startho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.



- **startvo**, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined start point.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac**s attribute.
- **x2**, optional, xs:decimal  
encodes the optional 2nd x coordinate.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac**s attribute.
- **y2**, optional, xs:decimal  
encodes the optional 2nd y coordinate.

## Module:

usersymbols

## <custos> *custos*

## Description:

Symbol placed at the end of a line of music to indicate the first note of the next line. Sometimes called a "direct". The most common visual form is a sign resembling a mordent. Other graphical forms may be indicated by the **altsym** attribute. Together the **pname** and **oct** attributes identify the location where the **custos** appears.

## May contain:

EMPTY

## May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sb](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuple](#), [turn](#), [unclear](#), [uneume](#)

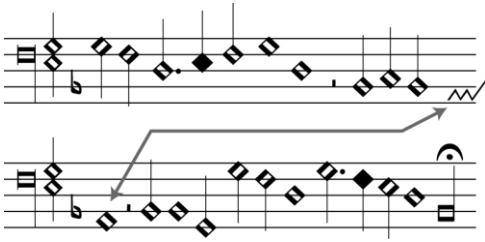
## Attributes:

- **altsym**, optional, **xs:IDREF**  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- **color**, optional, **xs:token**, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, **xs:IDREF**  
points to an element of which the current element is a copy.
- **corresp**, optional, **xs:IDREFS**  
used to point to other elements that correspond to this one in a generic fashion.
- **facts**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, **xs:IDREFS**  
used to point to the next event(s) in a user-defined collection.
- **oct**, optional, **xs:nonNegativeInteger**, 0 - 9  
captures written octave information.
- **pname**, optional, **xs:token**, "[a-g]"  
contains a written pitch name.
- **prev**, optional, **xs:IDREFS**  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, **xs:IDREFS**  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **source**, optional, **xs:IDREFS**  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **synch**, optional, **xs:IDREFS**  
points to elements that are synchronous with the current element.
- **target**, optional, **xs:IDREF**  
encodes the target note when its pitch differs from the pitch at which the custos appears.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## Illustration:



## <damage> damage

### Description:

Contains an area of damage to the carrier. In the case of damage resulting from an identifiable cause, the agent attribute signifies the causative agent. The degree attribute signifies the degree of damage according to a convenient scale. A <damage> tag with this attribute should only be used where the text may be read with some confidence; data supplied from other sources should be tagged as <supplied>. The extent attribute indicates approximately how much text is in the damaged area, in notes, measures, inches, or any appropriate unit, where this cannot be deduced from the contents of the tag. For example, the damage may span structural divisions in the text so that the tag must then be empty of content. In the case of damage (deliberate defacement, etc.) assignable to an identifiable hand, the hand attribute signifies the hand responsible for the damage. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

### May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

### Attributes:

- agent, optional, CDATA  
signifies the causative agent of damage, illegibility, or other loss of original text.
- degree, optional, CDATA  
records the degree of damage.
- extent, optional, CDATA  
indicates the extent of damage or omission.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.

- **hand**, optional, xs:IDREF  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

## <date> *date*

## Description:

A date in any format, including a date range. A date range may be expressed either as textual content, e.g., <date>March 1-21, 1812</date>, or using date sub-elements, possibly combined with text, e.g., <date><date>March 1, 1812</date> - <date>March 21, 1812</date> </date>. The latter form is useful when the starting and ending points of the date range require qualification. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [address](#), [annot](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [change](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [pubstmt](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **calendar**, optional, xs:NMTOKEN  
indicates the system or calendar to which a date belongs, for example, Gregorian, Julian, Roman, Mosaic, Revolutionary, Islamic, etc.

- cert, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- enddate, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the end point of a date range.
- evidence, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- notafter, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains an upper boundary for an uncertain date.
- notbefore, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains a lower boundary for an uncertain date.
- reg, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
gives the value of a date in standard ISO form.
- resp, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- source, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- startdate, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the starting point of a date range.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## <del> deletion

## Description:

Contains information deleted, marked as deleted, or otherwise indicated as superfluous or spurious in the copy text by an author, scribe, annotator, or corrector. The resp attribute contains an ID reference to an element containing the name of the editor or transcriber responsible for identifying the hand of the deletion. The cert

attribute signifies the degree of certainty ascribed to the identification of the hand of the deletion. The hand of the agent which made the deletion should be pointed to using the hand attribute. The rend attribute may be used to record the method used to make the deletion (overstrike, strike[through], etc.) or how the deleted matter should be displayed. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

### May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

### Attributes:

- **fac**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **hand**, optional, xs:IDREF  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **rend**, optional, CDATA  
contains an indication of how the deletion should be rendered.
- **seq**, optional, xs:positiveInteger  
used to assign a sequence number related to the order in which the encoded features carrying this attribute are believed to have occurred.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

edittrans

## <dimensions> dimensions

### Description:

Information about the physical size of a bibliographic source; usually includes numerical data. There are no height and width sub-elements; however, num sub-elements may be used with appropriate n attribute values. Measurements may be expressed in any convenient unit. Do not confuse this element with the <extent>

element, which is used to indicate the quantity of described materials. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

### May occur within:

[physdesc](#)

### Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- unit, optional, xs:NMTOKEN  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

header

### **<dir> directive**

### Description:

A text expression that is on the score (typically above, below, or between staves, but not on the staff) not encoded elsewhere in more specific elements, such as <tempo> or <dynam>. Examples include text strings, such as 'affettuoso' or fingering numbers, and music symbols, such as segno and coda symbols, fermatas over a barline, etc. Directives can be control elements. That is, they can be linked via their attributes to other events. The starting point of the directive may be indicated by either a tstamp, tstamp.ges, tstamp.real or startid attribute, while the ending point may be recorded by either a dur, dur.ges or endid attribute. It is a semantic error not to specify a starting point attribute.

### May contain:

PCDATA, [abbr](#), [add](#), [address](#), [anchoredtext](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [curve](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [line](#), [name](#), [num](#), [orig](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [symbol](#), [title](#), [unclear](#)

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#), [verse](#)

## Attributes:

- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **dur**, optional, xs:token, "([0-9]+m \*\\+ \*)?[0-9]+(\\.?[0-9]\*)?"  
encodes the duration of a feature as a timestamp for its endpoint rather than as a relative durational value.
- **dur.ges**, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **endho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined end point.
- **endid**, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- **endto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **place**, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.



- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac** attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac** attribute.

## Module:

shared

## Illustration:



## **<div> division**

### Description:

Major structural division of text, such as a preface, chapter or section. Often, the <head> sub-element identifies the <div>'s purpose. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

[blockquote](#), [div](#), [head](#), [lb](#), [lg](#), [list](#), [p](#), [pb](#), [table](#)

### May occur within:

[back](#), [div](#), [ending](#), [front](#), [layer](#), [lem](#), [measure](#), [ossia](#), [rdg](#), [score](#), [section](#), [staff](#), [syllable](#)

### Attributes:

- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### Module:

text

## <dot> dot

### Description:

This element provides an alternative to the dots attribute on chord, note, rest, space, tuplet, and tupletspan elements. It should be used when specific display info, such as size or color, needs to be recorded for the dot. This element may also be used for dots of division in the mensural repertoire.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)" used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- copyof, optional, xs:IDREF points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS permits the current element to reference a facsimile image or image zone which corresponds to it.
- form, optional, xs:token, aug, div records the function of the dot; that is, whether it is a dot of augmentation or a dot of division.
- ho, optional, xs:decimal records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- loc, optional, xs:nonNegativeInteger holds the staff location of the feature.
- n, optional, xs:NMTOKEN provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS points to an element that is the same as the current element but is not a literal copy of the current element.
- synch, optional, xs:IDREFS points to elements that are synchronous with the current element.
- vo, optional, xs:decimal records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.

- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

shared

## Illustration:

Dotted rest							
Beat value							
Dotted rest							
Beat value							
Dotted rest							
Beat value							
Dotted note							
Beat value							
Dotted note							
Beat value							
Dotted note							
Beat value							

## <dynam> dynamic

### Description:

Indication of the volume of a note, phrase, or section of music. This element may be used for instantaneous or continuous textual dynamics, e.g. 'p', 'mf', or 'cresc. poco a poco'. The <hairpin> element should be used for graphical, i.e., crescendo and diminuendo, dynamic markings. The starting point of the dynamic marking may be indicated by either a *tstamp*, *tstamp.ges*, *tstamp.real* or *startid* attribute, while the ending point may be recorded by either a *dur*, *dur.ges* or *endid* attribute. It is a semantic error not to specify a starting point attribute. Please note that the *dur* attribute is not a true duration, but rather a time stamp for the end point of the dynamic mark. A MIDI value associated with the graphical dynamic sign may be recorded in the *val* attribute.

### May contain:

PCDATA, [abbr](#), [add](#), [address](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#), [verse](#)

### Attributes:

- *copyof*, optional, *xs:IDREF*  
points to an element of which the current element is a copy.
- *corresp*, optional, *xs:IDREFS*  
used to point to other elements that correspond to this one in a generic fashion.
- *dur*, optional, *xs:token*, "([0-9]+m \*|+ \*)?[0-9]+(\.?[0-9]\*)?"  
encodes the duration of a feature as a timestamp for its endpoint rather than as a relative durational value.
- *dur.ges*, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- *endho*, optional, *xs:decimal*  
records the horizontal adjustment of a feature's programmatically-determined end point.
- *endid*, optional, *xs:IDREF*  
indicates the final element in a sequence of events to which the feature applies.
- *endto*, optional, *xs:decimal*  
records a timestamp adjustment of a feature's programmatically-determined end point.
- *facs*, optional, *xs:IDREFS*  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- *ho*, optional, *xs:decimal*  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- *layer*, optional, list of *xs:positiveInteger*, minimum length of 1  
signifies the layer within which a control event is active.
- *n*, optional, *xs:NMTOKEN*  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- place, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- plist, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- startho, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- startid, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- startto, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- to, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- val, optional, xs:nonNegativeInteger, 0 - 127  
captures a MIDI value.
- vo, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

shared

## Illustration:



## <edition> edition designation

### Description:

A word or text phrase that indicates a difference in either content or form between the item being described and a related item previously issued by the same publisher/distributor (e.g. 2nd edition, version 2.0, etc.), or simultaneously issued by either the same publisher/distributor or another publisher/distributor (e.g. large print edition, British edition, etc.). This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

### May occur within:

[bibl](#), [editionstmt](#)

### Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## **<editionstmt> edition statement**

### **Description:**

Container for meta-data pertaining to a particular edition of the material being described. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[edition](#), [respstmt](#)

### **May occur within:**

[filedesc](#), [source](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### **Module:**

header

## **<editorialdecl> editorial declaration**

### **Description:**

Used to provide details of editorial principles and practices applied during the encoding of musical text. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[correction](#), [interpretation](#), [normalization](#), [p](#), [segmentation](#), [stdvals](#)

### **May occur within:**

[encodingdesc](#)



**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

header

**<encodingdesc> encoding description****Description:**

Documents the relationship between an electronic file and the source or sources from which it was derived as well as applications used in the encoding/editing process. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[appinfo](#), [editorialdecl](#), [projectdesc](#), [samplingdecl](#)

**May occur within:**

[meihead](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

## <ending> ending

### Description:

Alternative ending for a repeated passage of music; i.e., prima volta, seconda volta, etc. The scoredef element is allowed as a sub-element so that an ending may have its own meta-data without the overhead of child <section>s. Div sub-elements are not allowed within ending in order to avoid collisions with the brackets that are usually displayed over endings. Endings may \*not\* contain other ending elements.

### May contain:

[add](#), [anchoredtext](#), [annot](#), [app](#), [choice](#), [corr](#), [curve](#), [damage](#), [del](#), [div](#), [ending](#), [expansion](#), [gap](#), [handshift](#), [line](#), [measure](#), [orig](#), [pb](#), [reg](#), [restore](#), [sb](#), [scoredef](#), [section](#), [sic](#), [staff](#), [staffdef](#), [staffgrp](#), [subst](#), [supplied](#), [symbol](#), [unclear](#)

### May occur within:

[ending](#), [lem](#), [part](#), [rdg](#), [score](#), [section](#)

### Attributes:

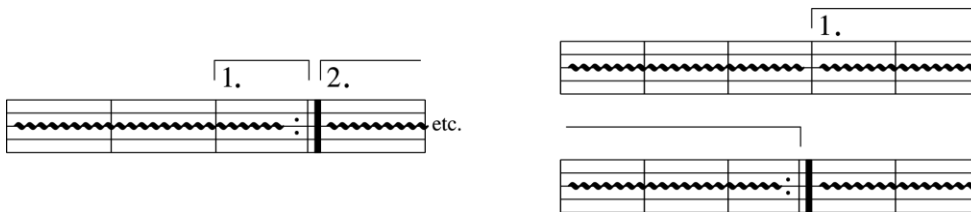
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- entityref, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- plist, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- subtype, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- targettype, optional, xs:NMTOKEN  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.

- **type**, optional, **xs:NMTOKEN**  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xlink:actuate**, optional, **xs:token**, **onLoad**, **onRequest**, **other**, **none**  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the **show** attribute to determine link behavior.
- **xlink:href**, optional, **xs:anyURI**  
allows the use of an previously undeclared URI to identify an external electronic object.
- **xlink:role**, optional, **xs:anyURI**  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.
- **xlink:show**, optional, **xs:token**, **new**, **replace**, **other**, **none**  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- **xlink:title**, optional, **CDATA**  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## Illustration:



## <event> event

## Description:

contains a description of an event, including the dates and locations of its occurrence and prominent participants. When a single date can be associated with the event, the attributes in the **att.dataable** class may provide a more machine-processable alternative than date elements within the content of **<event>**. **<table>** and **<list>** elements are allowed within **<event>** in order to accommodate structured content.

## May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [list](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [table](#), [title](#)

## May occur within:

[eventlist](#)

## Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **calendar**, optional, xs:NMTOKEN  
indicates the system or calendar to which a date belongs, for example, Gregorian, Julian, Roman, Mosaic, Revolutionary, Islamic, etc.
- **cert**, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- **enddate**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the end point of a date range.
- **evidence**, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **notafter**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains an upper boundary for an uncertain date.
- **notbefore**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains a lower boundary for an uncertain date.
- **reg**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
gives the value of a date in standard ISO form.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **startdate**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the starting point of a date range.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

header

**<eventlist> event list****Description:**

Contains historical information given as a sequence of significant past events. <eventlist> contains <event> elements that contain a brief description of the associated event, including dates and locations where the event took place. An <eventlist> describes events associated with a work when it appears in the <profiledesc> element or events associated with the custodial history of a given copy of a source for the encoding when it appears within the <source> element. The type attribute may be used to distinguish between event lists with different functions, such as a list of events in the compositional process and a list of performance dates.

**May contain:**

[event](#)

**May occur within:**

[profiledesc](#), [provenance](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- subtype, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- type, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

header

**<exhibithist> exhibition history****Description:**

A record of public exhibitions, including dates, venues, etc. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[physdesc](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

## **<expan> expansion**

## Description:

Contains the expansion of an abbreviation. The type attribute may be used to classify the abbreviation according to some convenient typology. This element is the mirror image of <abbr>. Both allow the encoder to transcribe both an abbreviation and its expansion. In <abbr>, however, the original is transcribed as the content of the element and the expansion as an attribute value; <expan> reverses this. The choice between the two elements is up to the user. If appropriate, the encoder may expand abbreviations in the source text silently, without tagging them. If this is done, the MEI header should indicate this has been done. The abbr attribute gives the abbreviation in its unexpanded form. The cert attribute signifies the degree of certainty ascribed to the expansion of the abbreviation. The resp attribute contains an ID reference to an element containing the name of the editor or transcriber responsible for supplying the expansion of the abbreviation held as the content of the <expan> element. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [choice](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- **abbr**, optional, CDATA  
captures the unabbreviated form of the text.
- **cert**, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- **evidence**, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **hand**, optional, xs:IDREF  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **seq**, optional, xs:positiveInteger  
used to assign a sequence number related to the order in which the encoded features carrying this attribute are believed to have occurred.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## **<expansion> expansion**

### **Description:**

Indicates how a section may be programmatically expanded into its 'through-composed' form. The plist attribute contains an ordered list of IDs of descendant <section>, <ending>, <lem>, or <rdg> elements. For example, the sequence "A End1 A End2" indicates that the section labelled 'A' comes first, then the ending labelled 'End1', followed by the 'A' section again, and finally the ending labelled 'End2'.

### **May contain:**

EMPTY

### **May occur within:**

[ending](#), [lem](#), [rdg](#), [section](#)

### **Attributes:**

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- plist, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- source, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- subtype, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- type, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

shared

## **<extent> extent**

### **Description:**

Used to express size in terms other than physical dimensions, such as number of pages, number of records in file, number of bytes, performance duration for music, audio recordings and visual projections, etc. Use the <dimensions> element when it is necessary to specify the physical size of materials being described, for example, height and width. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)



## May occur within:

[filedesc](#), [physdesc](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- unit, optional, xs:NMTOKEN  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

**<extptr> external pointer**

## Description:

An empty linking element that uses attributes to connect the MEI document to an external electronic object. Either the entityref or href attribute may be used to identify the external object. Don't confuse this element with the <ptr> element, which is an internal link for movement from one place in the MEI document to another in the same document. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

EMPTY

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgdesc](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- entityref, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- mimetype, optional, CDATA  
specifies the applicable MIME (multimedia internet mail extension) type. The value should be a valid MIME media type defined by the Internet Engineering Task Force in RFC 2046.

- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **targettype**, optional, **xs:NMTOKEN**  
in contrast with the **role** attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- **xlink:actuate**, optional, **xs:token**, **onLoad**, **onRequest**, other, **none**  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the **show** attribute to determine link behavior.
- **xlink:href**, optional, **xs:anyURI**  
allows the use of an previously-undeclared URI to identify an external electronic object.
- **xlink:role**, optional, **xs:anyURI**  
indicates a property of the entire link. The value of the **role** attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.
- **xlink:show**, optional, **xs:token**, **new**, **replace**, other, **none**  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- **xlink:title**, optional, **CDATA**  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each **id** attribute within a document must have a unique value.

## Module:

ptrref

## **<extref> external reference**

## Description:

A linking element that can include text and sub-elements as part of its reference to an electronic object that is external to the MEI document. Either the **entityref** or **href** attribute may be used to identify the external object. Don't confuse this element with the **<ref>** element, which is an internal link for movement from one place in the MEI document to another in the same document. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [address](#), [annot](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#),

[hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgdesc](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userstrict](#)

## Attributes:

- `entityref`, optional, `xs:ENTITY`  
uses a previously-declared entity to identify an external electronic object.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `targettype`, optional, `xs:NMTOKEN`  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- `xlink:actuate`, optional, `xs:token`, `onLoad`, `onRequest`, `other`, `none`  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the show attribute to determine link behavior.
- `xlink:href`, optional, `xs:anyURI`  
allows the use of an previously-undeclared URI to identify an external electronic object.
- `xlink:role`, optional, `xs:anyURI`  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.
- `xlink:show`, optional, `xs:token`, `new`, `replace`, `other`, `none`  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- `xlink:title`, optional, `CDATA`  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

`ptrref`

## **<facsimile> facsimile**

### **Description:**

Contains a representation of some written source in the form of a set of images rather than as transcribed or encoded text. The source attribute may be used to link the collection of images with a particular source described in the header. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[surface](#)

### **May occur within:**

[music](#)

### **Attributes:**

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- source, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

facsimile

## **<fermata> fermata**

### **Description:**

An indication placed over a note or rest to indicate that it should be held longer than its written value. May also occur over a barline to indicate the end of a phrase or section. Sometimes called a 'hold' or 'pause'. The <fermata> element is a specialized form of, i.e., syntactic sugar for, dir/@type="fermata" with &ferm; or &uferm; as its PCDATA content. Other visual forms of a fermata may be indicated via the altsym attribute. The starting point of the fermata may be indicated by either a tstamp, tstamp.ges, tstamp.real or startid attribute. It is a semantic error not to specify a starting point attribute.

### **May contain:**

EMPTY

### **May occur within:**

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

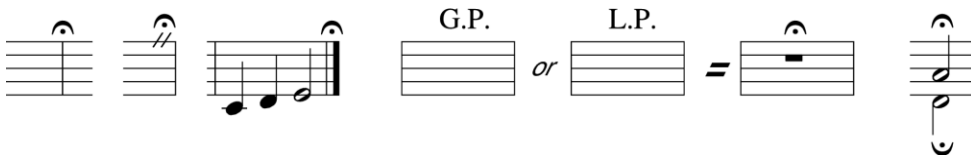
- **altsym**, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **dur.ges**, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **endid**, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **form**, optional, xs:token, inv, norm  
describes the visual appearance of the fermata.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **place**, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.

- `to`, optional, `xs:decimal`  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- `tstamp`, optional, `xs:decimal`, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- `tstamp.ges`, optional, `xs:nonNegativeInteger`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `vo`, optional, `xs:decimal`  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- `x`, optional, `xs:decimal`  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `y`, optional, `xs:decimal`  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.

## Module:

cmn

## Illustration:



## <fig> figure

## Description:

groups elements representing or containing graphic information such as an illustration or figure. This element is modelled on the figure element in the Text Encoding Initiative (TEI).

## May contain:

[caption](#), [figdesc](#), [graphic](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#),

[repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- **entityref**, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **targettype**, optional, xs:NMTOKEN  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- **xlink:actuate**, optional, xs:token, onLoad, onRequest, other, none  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the show attribute to determine link behavior.
- **xlink:href**, optional, xs:anyURI  
allows the use of an previously-undeclared URI to identify an external electronic object.
- **xlink:role**, optional, xs:anyURI  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.
- **xlink:show**, optional, xs:token, new, replace, other, none  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- **xlink:title**, optional, CDATA  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

figtable

## **<figdesc> figure description**

### **Description:**

Contains a brief prose description of the appearance or content of a graphic figure, for use when documenting an image without displaying it. Best practice suggests the use of controlled vocabulary. Don't confuse this element with a figure caption. A caption is text primarily intended for display with an illustration. It may or may not function as a description of the illustration. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

PCDATA, [anchoredtext](#), [annot](#), [blockquote](#), [curve](#), [lg](#), [line](#), [list](#), [p](#), [symbol](#), [table](#)

### **May occur within:**

[fig](#), [surface](#), [zone](#)

### **Attributes:**

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### **Module:**

figtable

## **<filedesc> file description**

### **Description:**

Contains a full bibliographic description of the MEI file. Extent in this context is file size. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[editionstmt](#), [extent](#), [fingerprint](#), [notesstmt](#), [pubstmt](#), [seriesstmt](#), [sourcedesc](#), [titlestmt](#)

### **May occur within:**

[meihead](#)

### **Attributes:**

- `analog`, optional, `CDATA`  
contains a reference to a field or element in another descriptive encoding system to which an MEI



element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

header

**<fingerprint> fingerprint**

### Description:

Traditionally, an identifier, constructed by combining groups of characters transcribed from specified pages of a printed item, which makes it possible to signal differences between copies of the item. For an electronic item, such as an MEI file, however, the fingerprint should be a checksum.

### May contain:

EMPTY

### May occur within:

[filedesc](#)

### Attributes:

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### Module:

header

## **<front> *front***

### **Description:**

Bundles prefatory text found before the start of the musical text. <titlepage> may be used to transcribe the item's title page. Other front matter structures, such as a preface, dedication, or table of contents, may be encoded as textual divisions; that is, as <div>s, with an optional <head> sub-element describing the nature of the division. The <pb> element is allowed here in order to accommodate page images, e.g. cover, endpapers, etc. before and after the actual textual matter. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[div](#), [lb](#), [pb](#), [titlepage](#)

### **May occur within:**

[music](#)

### **Attributes:**

- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### **Module:**

text

## **<ftrem> *fingered tremolo***

### **Description:**

A rapid alternation between a pair of notes (or chords or perhaps between a note and a chord) that are (usually) farther apart than a major second. For rapid alternation between notes on the same pitch (bowed tremolo, double & triple tonguing, and flutter tonguing) use the <btrem> element. The slash attribute records the number of slashes required — 4ths or 8ths=1, 16ths=2, 32nds=3, 64ths=4, 128ths=5, 256ths=6.

### **May contain:**

[chord](#), [note](#)

## May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

## Attributes:

- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **form**, optional, xs:token, meas, unmeas  
describes whether the tremolo is measured or unmeasured.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **slash**, optional, xs:positiveInteger, 1 - 6  
indicates the number of slashes to be rendered along with the feature.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn

## Illustration:



## <fw> forme work

### Description:

This element is intended for capture of header/footer material that is non-repeating; that is, it occurs on isolated pages. For recurring headers and footers use pgheadN and pgfootN elements. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

PCDATA, [abbr](#), [add](#), [address](#), [app](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [lg](#), [list](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

### May occur within:

[pb](#)

### Attributes:

- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## **<gap> gap**

## Description:

Indicates a point where material has been omitted in a transcription, whether as part of sampling practice or for editorial reasons described in the MEI header. When material is omitted because it is illegible or inaudible, `<unclear>` should be used instead. Similarly, use `<damage>` if the omission is due to damage and `<del>` if the omission is because the material is marked as deleted, or otherwise indicated as superfluous or spurious in the copy text by an author, scribe, annotator, or corrector. An indication of how much material has been omitted from the transcription may be recorded in the extent attribute. The unit attribute names the unit used for describing the extent of the gap. The reason attribute gives the reason for omission. Sample values include 'sampling', 'irrelevant', 'cancelled'. The resp attribute contains an ID reference to an element containing the name of the editor, transcriber or encoder responsible for the decision not to provide any transcription of the material and hence the application of the `<gap>` tag. The hand attribute signifies the hand which made the deletion in the case of text omitted from the transcription because of deliberate deletion by an identifiable hand. The cert attribute signifies the degree of certainty ascribed to the identification of the extent of the missing material. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

EMPTY

## May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

## Attributes:

- `cert`, optional, `xs:token`, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- `evidence`, optional, `xs:NMTOKEN`  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- `extent`, optional, `CDATA`  
indicates the extent of damage or omission.

- **hand**, optional, xs:IDREF  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **reason**, optional, CDATA  
holds a short phrase describing the reason for missing textual material (gap), why material is supplied (supplied), or why transcription is difficult (unclear).
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **unit**, optional, xs:NMTOKEN  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

## <geogname> *geographic name*

## Description:

The proper noun designation for a place, natural feature, or political jurisdiction. Examples include Black Forest; Baltimore, Maryland; and Quartier Latin, Paris. Name sub-parts may be encoded in <geogname> sub-elements. The name of the list from which a controlled value is taken, such as the Thesaurus of Geographic Names (TGN), may be recorded using the authority attribute. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [pubstmt](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **authority**, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- **cert**, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- **dbkey**, optional, xs:NMTOKEN  
used to record a value which serves as a primary key in an external database.
- **evidence**, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **nymref**, optional, xs:IDREF  
used to record a pointer to the regularized form of the name.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **role**, optional, CDATA  
used to specify further information about the entity referenced by this name, for example, the occupation of a person or the status of a place.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

namesdates

## <gliss> *glissando*

### Description:

A continuous or sliding movement from one pitch to another, usually indicated by a straight or wavy line. Commonly also called a 'slide'. The term 'glissando' is frequently used to indicate both the case where distinct intermediate pitches are produced (as on the piano) and the case where they are not (as on the trombone), though the latter is sometimes referred to as 'portamento'. The visual appearance of the indicating line may be recorded in the *rend* attribute. Precise performance data, that is, exact pitches, may be recorded within the <gliss> element. The starting point of the glissando may be indicated by either a *tstamp*, *tstamp.ges*, *tstamp.real* or *startid* attribute. It is a semantic error not to specify a starting point attribute.

### May contain:

[note](#), [rest](#), [tuplet](#)

### May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

### Attributes:

- *color*, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)" used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- *copyof*, optional, xs:IDREF points to an element of which the current element is a copy.
- *corresp*, optional, xs:IDREFS used to point to other elements that correspond to this one in a generic fashion.
- *endho*, optional, xs:decimal records the horizontal adjustment of a feature's programmatically-determined end point.
- *endid*, optional, xs:IDREF indicates the final element in a sequence of events to which the feature applies.
- *endto*, optional, xs:decimal records a timestamp adjustment of a feature's programmatically-determined end point.
- *endvo*, optional, xs:decimal records a vertical adjustment of a feature's programmatically-determined end point.
- *facs*, optional, xs:IDREFS permits the current element to reference a facsimile image or image zone which corresponds to it.
- *ho*, optional, xs:decimal records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- *layer*, optional, list of xs:positiveInteger, minimum length of 1 signifies the layer within which a control event is active.
- *n*, optional, xs:NMTOKEN provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- *next*, optional, xs:IDREFS used to point to the next event(s) in a user-defined collection.



- `plist`, optional, `xs:IDREFS`  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- `prev`, optional, `xs:IDREFS`  
points to the previous event(s) in a user-defined collection.
- `rend`, optional, `xs:token`, narrow, medium, wide, dashed, dotted, wavy  
records the appearance of a line.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `staff`, required, list of `xs:positiveInteger`, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- `startho`, optional, `xs:decimal`  
records the horizontal adjustment of a feature's programmatically-determined start point.
- `startid`, optional, `xs:IDREF`  
holds a reference to the first element in a sequence of events to which the feature applies.
- `startto`, optional, `xs:decimal`  
records a timestamp adjustment of a feature's programmatically-determined start point.
- `startvo`, optional, `xs:decimal`  
records a vertical adjustment of a feature's programmatically-determined start point.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `text`, optional, `CDATA`  
records any text, such as 'gliss', that accompanies the glissando mark.
- `to`, optional, `xs:decimal`  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- `tstamp`, optional, `xs:decimal`, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- `tstamp.ges`, optional, `xs:nonNegativeInteger`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `vo`, optional, `xs:decimal`  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- `x`, optional, `xs:decimal`  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.
- `x2`, optional, `xs:decimal`  
encodes the optional 2nd x coordinate.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `y`, optional, `xs:decimal`  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.
- `y2`, optional, `xs:decimal`  
encodes the optional 2nd y coordinate.

## Module:

cmn

## Illustration:



## <graphic> graphic

### Description:

Indicates the location of an inline graphic, illustration, or figure. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

EMPTY

### May occur within:

[fig](#), [surface](#), [zone](#)

### Attributes:

- **entityref**, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **height**, optional, xs:positiveInteger  
measurement of the vertical dimension of an image.
- **mimetype**, optional, CDATA  
specifies the applicable MIME (multimedia internet mail extension) type. The value should be a valid MIME media type defined by the Internet Engineering Task Force in RFC 2046.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **unit**, optional, xs:NMTOKEN  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- **width**, optional, xs:decimal  
measurement of the horizontal dimension of an entity. For example, some music printing systems rely on measure width data for rendering. The width attribute may be used to capture this data for interchange with these systems.
- **xlink:href**, optional, xs:anyURI  
allows the use of an previously-undeclared URI to identify an external electronic object.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

**Module:**

figtable

**<group> group**

**Description:**

Enables the gathering of multiple documents into a single file. Because its model contains the `music` element, each of the documents can have its own front and back matter. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[group](#), [music](#)

**May occur within:**

[group](#), [music](#)

**Attributes:**

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

**Module:**

shared

**<grpsym> group symbol**

**Description:**

A brace or bracket used to group two or more staves of a score or part. This element provides an alternative to the `staffgrp` element's `symbol` attribute. It may be used when exact placement or editorial details for the grouping symbol must be recorded.

**May contain:**

[label](#)

**May occur within:**

[staffgrp](#)

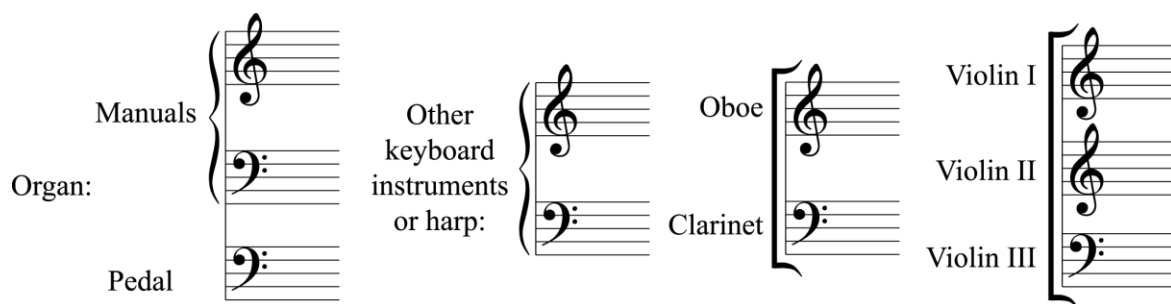
## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- ho, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- symbol, optional, xs:token, brace, bracket, line, none  
specifies the symbol used to group a set of staves.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- to, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- vo, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

shared

## Illustration:



## <hairpin> hairpin

### Description:

Indicates continuous dynamics expressed on the score as wedge-shaped graphics, e.g. < and >. The starting point of the hairpin may be indicated by either a `tstamp`, `tstamp.ges`, `tstamp.real` or `startid` attribute, while the ending point may be recorded by either a `dur`, `dur.ges` or `endid` attribute. It is a semantic error not to specify one starting and one ending type of attribute. Please note that the value of the `dur` attribute is not a true duration, but rather a time stamp for the end point of the hairpin.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- `color`, optional, `xs:token`, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)" used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- `copyof`, optional, `xs:IDREF` points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS` used to point to other elements that correspond to this one in a generic fashion.
- `dur`, optional, `xs:token`, "([0-9]+m \*|+ \*)?[0-9]+(\.?[0-9]\*)?" encodes the duration of a feature as a timestamp for its endpoint rather than as a relative durational value.
- `dur.ges`, optional, `CDATA` records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as `measures[s]+ beat[s].beatpart`, `ppq` (MIDI clicks), `Humdrum **recip` values, or MusicXML 'divisions', etc.
- `endho`, optional, `xs:decimal` records the horizontal adjustment of a feature's programmatically-determined end point.
- `endid`, optional, `xs:IDREF` indicates the final element in a sequence of events to which the feature applies.

- **endto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- **endvo**, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined end point.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **form**, required, xs:token, cres, dim  
captures the form and function of the hairpin.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **opening**, optional, xs:decimal  
specifies the distance between the points of the open end of a hairpin dynamic mark.
- **place**, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- **startvo**, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined start point.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.

- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `vo`, optional, `xs:decimal`  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- `x`, optional, `xs:decimal`  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.
- `x2`, optional, `xs:decimal`  
encodes the optional 2nd x coordinate.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `y`, optional, `xs:decimal`  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.
- `y2`, optional, `xs:decimal`  
encodes the optional 2nd y coordinate.

### Module:

cmn

### Illustration:



## **<halfmrpt> half-measure repeat**

### Description:

A half-measure repeat in any meter.

### May contain:

[barline](#), [beam](#), [beatrpt](#), [bend](#), [btrem](#), [chord](#), [clefchange](#), [custos](#), [ftrem](#), [gliss](#), [halfmrpt](#), [keysig](#), [ligature](#), [mensur](#), [note](#), [pad](#), [proport](#), [rest](#), [space](#), [tuplet](#)

### May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

### Attributes:

- `altsym`, optional, `xs:IDREF`  
provides a way of pointing to a user-defined symbol. It must contain an ID of a `<symboldef>` element elsewhere in the document.

- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **dur**, optional, xs:token, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
records the duration of a feature using the relative durational values provided by the data.DURATION datatype.
- **expand**, optional, xs:token, true, false  
indicates whether to render a repeat symbol or the source material to which it refers.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.



- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn

## <hand> hand

## Description:

Defines a distinct scribe or handwriting style. The initial attribute indicates whether this is the first or main scribe of the document. The medium attribute describes the writing medium, e.g., 'pencil', or the tint or type of ink, e.g. 'brown'. The resp attribute contains an ID reference to an element containing the name of the editor or transcriber responsible for identifying the hand. The characteristics of the hand, particularly those related to the quality of the writing, such as 'shaky', 'thick', etc. may be described within the content of the hand element. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[handlist](#)

## Attributes:

- `analog`, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- `initial`, optional, `xs:token`, true, false  
marks this hand as the initial one of the document.
- `medium`, optional, CDATA  
describes the writing medium.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `resp`, optional, `xs:IDREFS`  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a

corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

header

**<handlist> hand list**

**Description:**

Container for one or more hand elements. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[hand](#)

**May occur within:**

[physdesc](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

header

**<handshift> hand shift**

**Description:**

Marks the beginning of a passage written in a new hand, or of a change in the scribe, writing style, ink or character of the document hand. The character attribute describes characteristics of the hand, particularly those related to the quality of the writing, e.g., 'shaky', 'thick', regular'. A description of the tint or type of ink, e.g. 'brown' or the writing medium, e.g. 'pencil', may be placed in the medium attribute. The new hand may be identified using the new attribute, while the previous hand may be recorded in the old attribute. The resp attribute contains an ID reference to an element containing the name of the editor or transcriber responsible for identifying the change of hand. The cert attribute signifies the degree of certainty ascribed to the identification of the new hand. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

EMPTY

## May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

## Attributes:

- **cert**, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- **character**, optional, CDATA  
describes the character of the new hand.
- **evidence**, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **medium**, optional, CDATA  
describes the writing medium.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **new**, optional, xs:IDREF  
identifies the new hand. The value must contain the ID of a hand element given elsewhere in the document.
- **old**, optional, xs:IDREF  
identifies the old hand. The value must contain the ID of a hand element given elsewhere in the document.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

**<harm> harmony**

## Description:

An indication of harmony, e.g., chord names, tablature grids, harmonic analysis, figured bass. The starting point of the harmony may be indicated by either a **tstamp**, **tstamp.ges**, **tstamp.real** or **startid** attribute, while the ending

point may be recorded by either a dur, dur.ges or endid attribute. It is a semantic error not to specify a starting point attribute. The dur attribute encodes the logical and visual duration of the harmony. Please note that the dur attribute here is not a true duration, but rather a time stamp for the end point of the harmony.

### May contain:

PCDATA, [abbr](#), [add](#), [address](#), [anchoredtext](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [curve](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [line](#), [name](#), [num](#), [orig](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [symbol](#), [title](#), [unclear](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

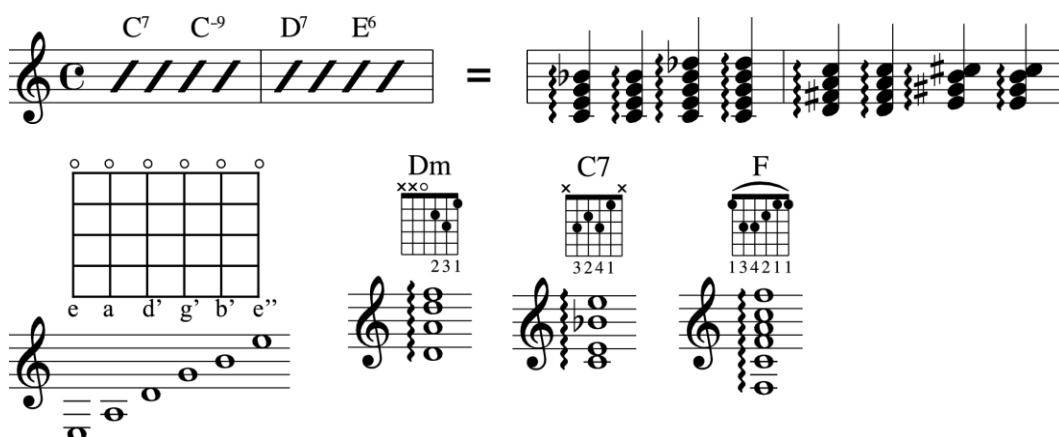
- **chordref**, optional, xs:IDREF  
contains a reference to a predefined <chorddef> element.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **dur**, optional, xs:token, "([0-9]+m \*|\+ \*)?[0-9]+(\.?[0-9]\*)?"  
encodes the duration of a feature as a timestamp for its endpoint rather than as a relative durational value.
- **dur.ges**, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **endho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined end point.
- **endid**, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- **endto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- **extender**, optional, xs:token, true, false  
indicates the presence of an extension symbol, typically a dash or underscore, drawn from the end of the harmonic indication to the point indicated by the dur attribute.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **place**, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.

- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **rendgrid**, optional, xs:token, grid, gridname  
when set to 'grid', the chord tablature grid defined in the chordtable should be rendered instead of the text contents of the <harm> element; if rendgrid equals 'gridname', both the <harm> element's text and the grid should be displayed; otherwise, only the 'name' of the chord, i.e., the text content of the <harm> element, e.g. 'Cmaj' or 'V7/III', should be rendered.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

harmony

## Illustration:



## <harppedal> harp pedal

### Description:

Harp pedal diagram. The starting point of the harp pedal diagram may be indicated by either a `tstamp`, `tstamp.ges`, `tstamp.real` or `startid` attribute. It is a semantic error not to specify a starting point attribute.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- `a`, optional, `xs:token`, `f`, `n`, `s`  
indicates the pedal setting, i.e., flat, natural, or sharp, for the harp's A strings.
- `b`, optional, `xs:token`, `f`, `n`, `s`  
indicates the pedal setting, i.e., flat, natural, or sharp, for the harp's B strings.
- `c`, optional, `xs:token`, `f`, `n`, `s`  
indicates the pedal setting, i.e., flat, natural, or sharp, for the harp's C strings.
- `color`, optional, `xs:token`, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `d`, optional, `xs:token`, `f`, `n`, `s`  
indicates the pedal setting, i.e., flat, natural, or sharp, for the harp's D strings.
- `dur.ges`, optional, `CDATA`  
records performed duration information that differs from written duration. Its value may be expressed in

any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.

- e, optional, xs:token, f, n, s  
indicates the pedal setting, i.e., flat, natural, or sharp, for the harp's E strings.
- endid, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- f, optional, xs:token, f, n, s  
indicates the pedal setting, i.e., flat, natural, or sharp, for the harp's F strings.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- g, optional, xs:token, f, n, s  
indicates the pedal setting, i.e., flat, natural, or sharp, for the harp's G strings.
- ho, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- layer, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- place, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- plist, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- startid, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- to, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.

- vo, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

cmn

## <head> heading

## Description:

Contains any heading, for example, the title of a section of text, or the heading of a list. When <head> is used, it should be the first sub-element, followed by one or more other elements. This element is modelled on elements in Encoded Archival Description (EAD), Text Encoding Initiative (TEI), and HTML.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[div](#), [lg](#), [list](#)

## Attributes:

- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.



- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facts attribute.

## Module:

text

**<hex> hex**

## Description:

Arbitrary MIDI data in hexadecimal form. The element's content must be wrapped in a CDATA section to avoid parsing errors.

## May contain:

EMPTY

## May occur within:

[midi](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

midi

**<identifier> identifier****Description:**

An alpha-numeric string that establishes the identity of the described material, such as an International Standard Book/Music Number, Library of Congress Control Number, publisher's number, plate number, a personal identification number, an entry in a bibliography or catalog, etc. The type attribute may be used to indicate the system from which the identifier was derived.

**May contain:**

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

**May occur within:**

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [pubstmt](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [seriesstmt](#), [sic](#), [source](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- subtype, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- type, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

shared

## <ineume> *interrupted neume*

### Description:

a graphically interrupted neume; that is, a neume which is logically a single entity but is written using multiple signs. The constituent signs may be encoded using ineume and uneume sub-elements.

### May contain:

[add](#), [app](#), [barline](#), [beam](#), [beatrpt](#), [bend](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corr](#), [custos](#), [damage](#), [del](#), [ftrem](#), [gap](#), [gliss](#), [halfmrpt](#), [handshift](#), [ineume](#), [keysig](#), [ligature](#), [mensur](#), [note](#), [orig](#), [pad](#), [proport](#), [reg](#), [rest](#), [restore](#), [sic](#), [space](#), [subst](#), [supplied](#), [tuplet](#), [unclear](#), [uneume](#), [verse](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)" used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- copyof, optional, xs:IDREF points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS permits the current element to reference a facsimile image or image zone which corresponds to it.
- form, optional, xs:token, liquescent1, liquescent2, tied, tiedliquescent1, tiedliquescent2 provides a subclass or functional label for the neume.
- n, optional, xs:NMTOKEN provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- name, optional, xs:token, pessubpunctis, climacus, scandicus, bistropha, tristropha, pressusminor, pressusmaior records a name of an interrupted neume.
- next, optional, xs:IDREFS used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS points to an element that is the same as the current element but is not a literal copy of the current element.
- subtype, optional, xs:NMTOKEN provide any sub-classification for the element, additional to that given by its type attribute.
- synch, optional, xs:IDREFS points to elements that are synchronous with the current element.
- type, optional, xs:NMTOKEN characterizes the element in some sense, using any convenient classification scheme or typology.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

neumes

## <inscription> inscription

## Description:

An inscription added to an item, such as a bookplate, a note designating the item as a gift, and/or the author's signature.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[physdesc](#)

## Attributes:

- `analog`, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

## <instrdef> instrument definition

### Description:

MIDI instrument declaration. This element provides a starting or default instrument declaration for a staff, a group of staves, or a layer. MIDI prog elements may then change the instrument as necessary.

### May contain:

EMPTY

### May occur within:

[instrgrp](#), [layerdef](#), [staffdef](#), [staffgrp](#)

### Attributes:

- **midi.channel**, optional, xs:positiveInteger, 0 - 16  
records a MIDI channel value.
- **midi.duty**, optional, xs:token, "[0-9]+(\.[0-9]\*)?"  
specifies the 'on' part of the duty cycle as a percentage of a note's duration.
- **midi.instrname**, optional, xs:token, Acoustic\_Grand\_Piano, Bright\_Acoustic\_Piano, Electric\_Grand\_Piano, Honky-tonk\_Piano, Electric\_Piano\_1, Electric\_Piano\_2, Harpsichord, Clavi, Celesta, Glockenspiel, Music\_Box, Vibraphone, Marimba, Xylophone, Tubular\_Bells, Dulcimer, Drawbar\_Organ, Percussive\_Organ, Rock\_Organ, Church\_Organ, Reed\_Organ, Accordion, Harmonica, Tango\_Accordion, Acoustic\_Guitar\_nylon, Acoustic\_Guitar\_steel, Electric\_Guitar\_jazz, Electric\_Guitar\_clean, Electric\_Guitar\_muted, Overdriven\_Guitar, Distortion\_Guitar, Guitar\_harmonics, Acoustic\_Bass, Electric\_Bass\_finger, Electric\_Bass\_pick, Fretless\_Bass, Slap\_Bass\_1, Slap\_Bass\_2, Synth\_Bass\_1, Synth\_Bass\_2, Violin, Viola, Cello, Contrabass, Tremolo\_Strings, Pizzicato\_Strings, Orchestral\_Harp, Timpani, String\_Ensemble\_1, String\_Ensemble\_2, SynthStrings\_1, SynthStrings\_2, Choir\_Aahs, Voice\_Oohs, Synth\_Voice, Orchestra\_Hit, Trumpet, Trombone, Tuba, Muted\_Trumpet, French\_Horn, Brass\_Section, SynthBrass\_1, SynthBrass\_2, Soprano\_Sax, Alto\_Sax, Tenor\_Sax, Baritone\_Sax, Oboe, English\_Horn, Bassoon, Clarinet, Piccolo, Flute, Recorder, Pan\_Flute, Blown\_Bottle, Shakuhachi, Whistle, Ocarina, Lead\_1\_square, Lead\_2\_sawtooth, Lead\_3\_calliope, Lead\_4\_chiff, Lead\_5\_charang, Lead\_6\_voice, Lead\_7\_fifths, Lead\_8\_bass\_and\_lead, Pad\_1\_new\_age, Pad\_2\_warm, Pad\_3\_polysynth, Pad\_4\_choir, Pad\_5\_bowed, Pad\_6\_metallic, Pad\_7\_halo, Pad\_8\_sweep, FX\_1\_rain, FX\_2\_soundtrack, FX\_3\_crystal, FX\_4\_atmosphere, FX\_5\_brightness, FX\_6\_goblins, FX\_7\_echoes, FX\_8\_sci-fi, Sitar, Banjo, Shamisen, Koto, Kalimba, Bagpipe, Fiddle, Shanai, Tinkle\_Bell, Agogo, Steel\_Drums, Woodblock, Taiko\_Drum, Melodic\_Tom, Synth\_Drum, Reverse\_Cymbal, Guitar\_Fret\_Noise, Breath\_Noise, Seashore, Bird\_Tweet, Telephone\_Ring, Helicopter, Applause, Gunshot  
provides a label for the MIDI instrument.
- **midi.instrnum**, optional, xs:nonNegativeInteger, 0 - 127  
sets the MIDI instrument number.
- **midi.port**, optional, xs:nonNegativeInteger, 0 - 127  
sets the default MIDI port value.
- **midi.track**, optional, xs:positiveInteger  
sets the default MIDI track.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

**Module:**

shared

**<instrgrp> instrument group**

**Description:**

Collects MIDI instrument definitions.

**May contain:**

[instrdef](#)

**May occur within:**

[scoredef](#)

**Attributes:**

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

**Module:**

shared

**<interpretation> interpretation**

**Description:**

Describes the scope of any analytic or interpretive information added to the transcription of the music. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[p](#)

**May occur within:**

[editorialdecl](#)

**Attributes:**

- `analog`, optional, `CDATA`  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest

selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.

- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

## <item> item

## Description:

Single item in a <list>. This element is modelled on elements in Encoded Archival Description (EAD), Text Encoding Initiative (TEI), and HTML.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [lg](#), [list](#), [name](#), [num](#), [orig](#), [p](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

## May occur within:

[list](#)

## Attributes:

- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

text

## <keyaccid> *key accidental*

### Description:

Accidental in a key signature. It is a semantic error not to provide either the x and y pair of attributes or the staffloc attribute.

### May contain:

EMPTY

### May occur within:

[keychange](#), [keysig](#)

### Attributes:

- accid, optional, xs:token, s, f, ss, x, ff, xs, tb, n, nf, ns, su, sd, fu, fd, nu, nd  
captures a written accidental.
- enclose, optional, xs:token, paren, brack  
records the characters often used to mark accidentals, articulations, and sometimes notes as having a cautionary or editorial function. For an example of cautionary accidentals enclosed in parentheses, see Read, p. 131, ex. 9-14.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- form, optional, xs:token, implicit, explicit  
specifies whether the accidental allows written enharmonic values (explicit) or only performed (implicit) values.
- loc, optional, xs:nonNegativeInteger  
holds the staff location of the feature.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- oct, optional, xs:nonNegativeInteger, 0 - 9  
captures written octave information.
- pname, optional, xs:token, "[a-g]"  
contains a written pitch name.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

### Module:

shared



## **<keychange> *key change***

### **Description:**

Change of key signature.

### **May contain:**

[keyaccid](#)

### **May occur within:**

### **Attributes:**

- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

shared

## **<keysig> *key signature***

### **Description:**

This element may be used as an alternative to the **key.\*** attributes (especially **key.sig.mixed**) on **scoredef** and **staffdef**.

### **May contain:**

[keyaccid](#)

### **May occur within:**

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [scoredef](#), [sic](#), [staffdef](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

### **Attributes:**

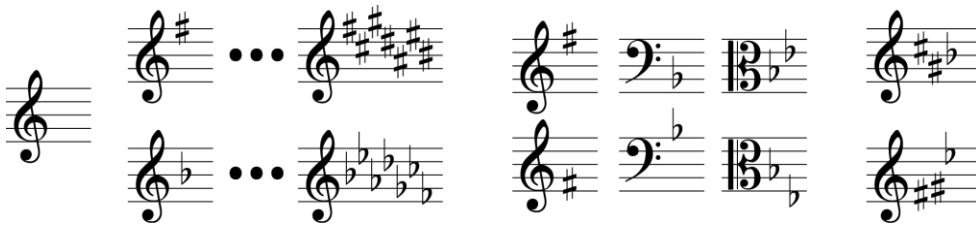
- **accid**, optional, **xs:token**, **s**, **f**, **ss**, **x**, **ff**, **xs**, **tb**, **n**, **nf**, **ns**, **su**, **sd**, **fu**, **fd**, **nu**, **nd**  
captures a written accidental.
- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **mode**, optional, **xs:token**, **major**, **minor**, **dorian**, **phrygian**, **lydian**, **mixolydian**, **aeolian**, **locrian**  
indicates major, minor, or other tonality.

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- pname, optional, xs:token, "[a-g]"  
contains a written pitch name.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## Illustration:



## <keywords> keywords

## Description:

Collection of keywords or text phrases which describe the work. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[term](#)

## May occur within:

[classification](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

header

**</> *line of text***

## Description:

Contains a single line of text within a line group. The `n` attribute should be used to record a label for the line, i.e., most likely a line number. Do not confuse this element with the `<line>` element, which is used for graphical lines that occur in music notation. This element is modelled on elements in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[lg](#)

## Attributes:

- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

text

**<label> *label***

## Description:

A text string that identifies a staff or staff group.

### May contain:

PCDATA, [abbr](#), [add](#), [address](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

### May occur within:

[grpsym](#), [staffdef](#), [staffgrp](#)

### Attributes:

- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `source`, optional, `xs:IDREFS`  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a `<source>` element located in the document header.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

shared

**<language>** *language*

### Description:

Description of a language used in the document. A text element may be related to this element via its `xml:lang` attribute, which normally takes the form of a code, drawn from a coded list, such as ISO639-2b. The name of the authorizing list may be encoded in the authority attribute. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

### May occur within:

[language](#)

### Attributes:

- `analog`, optional, `CDATA`  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.

- authority, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

header

## **<language> *language usage***

### Description:

Language groups elements describing the languages, sublanguages, dialects, etc., represented within the encoded work. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

[language](#)

### May occur within:

[profiledesc](#), [source](#)

### Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

header

## <layer> layer

### Description:

An independent stream of events on a staff. The term 'layer' is used instead of 'voice' in order to avoid confusion between 'voice' and 'voice leading'. The n attribute is used to establish a connection back to the appropriate layerdef element.

### May contain:

[accid](#), [add](#), [anchoredtext](#), [annot](#), [app](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corr](#), [curve](#), [custos](#), [damage](#), [del](#), [dir](#), [div](#), [dot](#), [dynam](#), [fermata](#), [ftrem](#), [gap](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [ineume](#), [keysig](#), [ligature](#), [line](#), [lyrics](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [note](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [phrase](#), [proport](#), [reg](#), [reh](#), [rest](#), [restore](#), [sb](#), [scoredef](#), [sic](#), [slur](#), [space](#), [staffdef](#), [staffgrp](#), [subst](#), [supplied](#), [syllable](#), [symbol](#), [tempo](#), [tie](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [lem](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [staff](#), [supplied](#), [unclear](#)

### Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- visible, optional, xs:token, true, false  
indicates if a feature should be rendered when the notation is presented graphically or sounded.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

### Module:

shared

## Illustration:



## **<layerdef> layer definition**

### **Description:**

Container for layer meta-information.

### **May contain:**

[instrdef](#)

### **May occur within:**

[staffdef](#)

### **Attributes:**

- **beam.group**, optional, CDATA  
provides an example of how automated beaming (including secondary beams) is to be performed. It can be used to set a default beaming pattern to be used when no beaming is indicated at the event level. beam.group must contain a comma-separated list of time values that add up to a measure, e.g., in 4/4 time '4,4,4,4' indicates each quarter note worth of shorter notes would be beamed together. Parentheses can be used to indicate sub-groupings of secondary beams. For example, '(4.,4.,4.)' in 9/8 meter indicates one outer beam per measure with secondary beams broken at each dotted quarter duration, while a measure of 16th notes in 4/4 with beam.group equal to '(4,4),(4,4)' will result in a primary beam covering all the notes and secondary beams each group of 4 notes. This beaming "directive" can be overridden by using <beam> elements. If neither <beam> elements or the beam.group attribute is used, then no beaming is rendered. Beaming can be 'turned off' by setting beam.group to an empty string.
- **beam.rend**, optional, xs:token, acc, rit, norm  
encodes whether a beam is feathered and in which direction.
- **beam.rests**, optional, xs:token, true, false  
indicates whether automatically-drawn beams should include rests shorter than a quarter note duration.
- **beam.slope**, optional, xs:decimal  
captures default beam slope.
- **dur.default**, optional, xs:token, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
contains a default duration in those situations when the first note, rest, chord, etc. in a measure does not have a duration specified.
- **instr**, optional, xs:IDREF  
provides a way of pointing to a MIDI instrument definition. It must contain the ID of an <instrdef> element elsewhere in the document.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- `octave.default`, optional, `xs:nonNegativeInteger`, 0 - 9  
contains a default octave specification for use when the first note, rest, chord, etc. in a measure does not have an octave value specified.
- `text.fam`, optional, `xs:token`  
provides a default value for the font family name of text (other than lyrics) when this information is not provided on the individual elements.
- `text.name`, optional, `xs:token`  
provides a default value for the font name of text (other than lyrics) when this information is not provided on the individual elements.
- `text.size`, optional, `xs:decimal`  
provides a default value for the font size of text (other than lyrics) when this information is not provided on the individual elements.
- `text.style`, optional, `xs:token`, `ital`, `normal`, `oblique`  
provides a default value for the font style of text (other than lyrics) when this information is not provided on the individual elements.
- `text.weight`, optional, `xs:token`, `bold`  
provides a default value for the font weight for text (other than lyrics) when this information is not provided on the individual elements.
- `visible`, optional, `xs:token`, `true`, `false`  
indicates if a feature should be rendered when the notation is presented graphically or sounded.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## **<lb> line break**

## Description:

An empty formatting element that forces text to begin on a new line. The `n` attribute should be used to record a label for the line, i.e., most likely a line number. See comment on `<verse>` element for description of `func` attribute. Do not confuse this element with the `<sb>` element, which performs a similar function for musical notation. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

EMPTY

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [back](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [div](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [front](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [titlepage](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#), [verse](#)



## Attributes:

- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **func**, optional, xs:token, line, group  
states whether the line break follows a single line or a line group.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## <lem> lemma

## Description:

Contains the lemma, or base text, of a textual variation. The **lem** element may also be used, under some circumstances, to record the base text of the source edition, to mark the readings of a base witness, to indicate the preference of an editor or encoder for a particular reading, or to make clear, in cases of ambiguity, precisely which portion of the main text the variation applies to. Those who prefer to work without the notion of a base text may prefer not to use it at all. An integer indicating the position of this reading in a sequence, when there is reason to presume a sequence of the variant readings, may be captured in the **seq** attribute. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [anchoredtext](#), [annot](#), [app](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [blockquote](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [curve](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [div](#), [dot](#), [dynam](#), [ending](#), [expan](#), [expansion](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [lg](#), [ligature](#), [line](#), [list](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [ossia](#), [p](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [sb](#), [scoredef](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [staffdef](#), [staffgrp](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [symbol](#), [table](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#), [verse](#)

## May occur within:

[app](#)

## Attributes:

- **cause**, optional, xs:NMTOKEN  
classifies the cause for the variant reading, according to any appropriate typology of possible origins.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **entityref**, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- **hand**, optional, xs:IDREF  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **seq**, optional, xs:positiveInteger  
used to assign a sequence number related to the order in which the encoded features carrying this attribute are believed to have occurred.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **targettype**, optional, xs:NMTOKEN  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xlink:actuate**, optional, xs:token, onLoad, onRequest, other, none  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the show attribute to determine link behavior.
- **xlink:href**, optional, xs:anyURI  
allows the use of an previously-undeclared URI to identify an external electronic object.
- **xlink:role**, optional, xs:anyURI  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined

in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.

- `xlink:show`, optional, `xs:token`, new, replace, other, none  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- `xlink:title`, optional, CDATA  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

critapp

## **<lg>** *line group*

## Description:

Usually contains a lyric verse although it may be used for any section of text that is organized as a group of lines. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[head](#), 1

## May occur within:

[annot](#), [blockquote](#), [creation](#), [div](#), [figdesc](#), [fw](#), [item](#), [lem](#), [pgdesc](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [td](#), [th](#), [titlepage](#)

## Attributes:

- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `x`, optional, `xs:decimal`  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `facs` attribute.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a

corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

text

## <ligature> *ligature*

## Description:

A mensural notation symbol that combines two or more notes into a single sign. The rhythmic meaning of the components of a ligature is typically contextual, not absolute; therefore, an interpretative duration may be encoded on each of the components using either the dur.ges attribute or the num and numbase attribute pair. The <ligature> element should *not* be used for brackets in modern notation that indicate notes that were part of a ligature in the original source.

## May contain:

[accid](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [breath](#), [btrem](#), [chord](#), [clefchange](#), [custos](#), [dir](#), [dot](#), [dynam](#), [fermata](#), [ftrem](#), [gliss](#), [hairpin](#), [halfmrpt](#), [harm](#), [harppedal](#), [ineume](#), [keysig](#), [ligature](#), [lyrics](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [note](#), [octave](#), [pad](#), [pedal](#), [phrase](#), [proport](#), [reh](#), [rest](#), [slur](#), [space](#), [syllable](#), [tempo](#), [tie](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [uneume](#)

## May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- form, optional, xs:token, recta, obliqua  
provides an indication of the function of the ligature.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.

- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

mensural

## <line> *line*

## Description:

A line that cannot be represented by a more specific element. The starting point of the line may be identified in absolute output coordinate terms using the x1 and y1 attributes or relative to the location of another element using the startid attribute. The attributes in the att.visualoffset class may be used to record horizontal, vertical, or time offsets from the absolute coordinates or from the location of the referenced element. Similarly, the terminal point of the line may be recorded using either the x2 and y2 attributes or in relation to the location of another element using the endid attribute. Attributes in the att.visualoffset2 class maybe used to record the offsets of the ending point. Text content of the line element, e.g. 'gliss.', may be rendered with the line. The appearance of the line is captured in the rend attribute.

## May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[dir](#), [ending](#), [figdesc](#), [harm](#), [layer](#), [lem](#), [measure](#), [ossia](#), [pgdesc](#), [rdg](#), [score](#), [section](#), [staff](#), [syllable](#), [symboldef](#), [tempo](#)

## Attributes:

- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- endho, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined end point.
- endid, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- endto, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- endvo, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined end point.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.

- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **rend**, optional, xs:token, narrow, medium, wide, dashed, dotted, wavy  
records the appearance of a line.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **startho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- **startvo**, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined start point.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac**s attribute.
- **x2**, optional, xs:decimal  
encodes the optional 2nd x coordinate.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac**s attribute.
- **y2**, optional, xs:decimal  
encodes the optional 2nd y coordinate.

## Module:

usersymbols

## **<list> list**

## Description:

A formatting element that contains a series of items separated from one another and arranged in a linear, of vertical sequence. This element is modelled on elements in Encoded Archival Description (EAD), Text Encoding Initiative (TEI), and HTML.

## May contain:

[head](#), [item](#)

## May occur within:

[annot](#), [blockquote](#), [creation](#), [div](#), [event](#), [figdesc](#), [fw](#), [item](#), [lem](#), [p](#), [pgdesc](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [seriesstmt](#), [td](#), [th](#), [titlepage](#)

## Attributes:

- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **form**, optional, xs:token, simple, marked, ordered  
used to identify and format a list. In a "simple" list, <item>s are not numbered or bulleted. In a "marked" list, the sequence of the list items is not critical, and a bullet, box, dash, or other character is displayed at the start of each <item>. In an "ordered" list, the sequence of the items is important, and each <item> is lettered or numbered. Style sheet functions should be used to specify the mark or numeration system for each <item>.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

text

## <lyrics> lyrics

### Description:

Vocally performed 'text' of a musical composition, such as a song or opera. The staff attribute gives the staff to which the lyrics are attached. If there is more than one layer on that staff, the layer attribute may be used to indicate the layer from which the rhythm should be taken. Often, automatic text underlay may rely on the notes of the indicated staff. When this is not desirable, however, the rhythm of the lyrics may be recorded in the rhythm attribute of the parent verse element.

### May contain:

[verse](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- fontfam, optional, xs:token  
contains the name of a font-family.
- fontname, optional, xs:token  
records the name of the font.
- fontsize, optional, xs:decimal  
indicates the size of the font in printers' points, i.e., 1/72nd of an inch.
- fontstyle, optional, xs:token, ital, normal, oblique  
records the style of the font, i.e, italic, oblique, or normal.
- fontweight, optional, xs:token, bold  
used to indicate bold type.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- place, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.



- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

lyrics

## **<marker> marker**

## Description:

MIDI marker meta-event.

## May contain:

EMPTY

## May occur within:

[midi](#)

## Attributes:

- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `layer`, optional, `xs:positiveInteger`  
identifies the layer to which a feature applies.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `next`, optional, `xs:IDREFS`  
used to point to the next event(s) in a user-defined collection.
- `prev`, optional, `xs:IDREFS`  
points to the previous event(s) in a user-defined collection.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `staff`, required, list of `xs:positiveInteger`, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `tstamp`, optional, `xs:decimal`, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

midi

## **<mdiv> musical division**

## Description:

The `mdiv` element may contain one or both of 2 possible views of the music. The score view is the traditional full and open score while the parts view contains each performer's view of the score; that is, his part. These 2 views are necessary because it is not always possible or desirable to generate one from the other. The score and parts elements are placed here and not directly within the body element because score and part characteristics may change from `mdiv` to `mdiv`. For example, the 2nd movement of a symphony may require different performing forces (and therefore different score and part layout) than the other movements. The `mdiv` element may be recursively nested in order to represent music which exhibits this kind of structure. For example, an opera is normally divided into acts, which are in turn divided into scenes.

## May contain:

[mdiv](#), [parts](#), [score](#)

## May occur within:

[body](#), [mdiv](#)

## Attributes:

- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `subtype`, optional, `xs:NMTOKEN`  
provide any sub-classification for the element, additional to that given by its type attribute.
- `type`, optional, `xs:NMTOKEN`  
characterizes the element in some sense, using any convenient classification scheme or typology.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

shared

## <measure> measure

### Description:

"Unit of musical time consisting of a fixed number of note-values of a given type, as determined by the prevailing meter, and delimited in musical notation by two bar lines." (New Harvard Dictionary of Music) In MEI, the measure element is a grouping mechanism for events and control events. It is also a linking element that uses attributes to connect the MEI document to an external electronic object or to another location within the MEI instance.

### May contain:

[add](#), [anchoredtext](#), [annot](#), [app](#), [arpeg](#), [beamspan](#), [breath](#), [choice](#), [corr](#), [curve](#), [damage](#), [del](#), [dir](#), [div](#), [dynam](#), [fermata](#), [gap](#), [hairpin](#), [handshift](#), [harm](#), [harppedal](#), [line](#), [lyrics](#), [midi](#), [mordent](#), [octave](#), [orig](#), [ossia](#), [pb](#), [pedal](#), [phrase](#), [reg](#), [reh](#), [restore](#), [sb](#), [scoredef](#), [sic](#), [slur](#), [staff](#), [staffdef](#), [staffgrp](#), [subst](#), [supplied](#), [symbol](#), [tempo](#), [tie](#), [trill](#), [tupletspan](#), [turn](#), [unclear](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [ending](#), [lem](#), [orig](#), [rdg](#), [reg](#), [restore](#), [section](#), [sic](#), [supplied](#), [unclear](#)

### Attributes:

- **barplace**, optional, xs:token, mensur, staff, takt  
records the location of a barline.
- **complete**, optional, xs:token, c, i, o  
a value of 'c' (complete) indicates a metrically complete measure, 'i' (incomplete) indicates a measure with not enough beats, while 'o' (overfull) is for measures with too many beats.
- **control**, optional, xs:token, true, false  
indicates whether or not a barline is "controlling"; that is, if it indicates a point of alignment across all the parts. Barlines within a score are usually controlling; that is, they "line up". Barlines within parts may or may not be controlling. When applied to <measure>, this attribute indicates the nature of the right barline but not the left.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **entityref**, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **join**, optional, xs:IDREFS  
used for linking visually separate slurs, sometimes necessary due to system breaks, that form a single musical phrase. Also used to indicate a measure which metrically completes the current one. Record the IDs of the separately encoded components, excluding this one.
- **left**, optional, xs:token, dashed, dotted, dbl, dbldashed, dbldotted, end, invis, rptstart, rptboth, rptend, single  
indicates the visual rendition of the left barline. It is present here only for facilitation of translation from legacy encodings which use it. Usually, it can be safely ignored.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- plist, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- right, optional, xs:token, dashed, dotted, dbl, dbldashed, dbldotted, end, invis, rptstart, rptboth, rptend, single  
indicates the function of the right barline and is structurally important.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- subtype, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- taktplace, optional, xs:nonNegativeInteger  
If takt barlines are to be used, then the taktplace attribute may be used to denote the staff location of the shortened barline. The location may include staff lines, spaces, and the spaces directly above and below the staff. The value ranges between 0 (just below the staff) to 2 \* number of staff lines (directly above the staff). For example, on a 5-line staff the lines would be numbered 1,3,5,7, and 9 while the spaces would be numbered 0,2,4,6,8,10. For example, a value of '9' puts the barline through the top line of a 5-line staff.
- targettype, optional, xs:NMTOKEN  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- type, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- unit, optional, xs:NMTOKEN  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- width, optional, xs:decimal  
measurement of the horizontal dimension of an entity. For example, some music printing systems rely on measure width data for rendering. The width attribute may be used to capture this data for interchange with these systems.
- xlink:actuate, optional, xs:token, onLoad, onRequest, other, none  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the show attribute to determine link behavior.
- xlink:href, optional, xs:anyURI  
allows the use of an previously-undeclared URI to identify an external electronic object.
- xlink:role, optional, xs:anyURI  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.

- xlink:show, optional, xs:token, new, replace, other, none  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- xlink:title, optional, CDATA  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

cmn

### Illustration:



### <mei> mei

### Description:

The document element for a single document, containing a header and data. The <mei> element defines a particular instance of a document encoded with the MEI schema. The name of this element should not be changed in order to assure an absolute minimum level of MEI compliance.

### May contain:

[meihead](#), [music](#)

### May occur within:

[meicorpus](#)

### Attributes:

- meiversion, optional, xs:token, 1.9b  
records the version of MEI used by the file.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

shared

## **<meicorpus> meicorpus**

### **Description:**

The document element for a group of related MEI documents, each with its own complete header, contains a header for the group, and one or more <mei> elements. The group may be related in a number of ways, for example, by composer, by similar instrumentation, by holding institution, etc. This element's name should not be changed in order to assure an absolute minimum level of MEI compliance. This element is modelled on the *teiCorpus* element in the Text Encoding Initiative (TEI).

### **May contain:**

[mei](#), [meihead](#)

### **May occur within:**

### **Attributes:**

- *meiversion*, optional, *xs:token*, 1.9b  
records the version of MEI used by the file.
- *n*, optional, *xs:NMTOKEN*  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- *xml:id*, optional, *xs:ID*  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

corpus

## **<meihead> meihead**

### **Description:**

A wrapper for general bibliographic and descriptive information about the encoded file. This information is often essential in a machine-readable environment. Five sub-elements must be encoded in the following order: <altmeiid>(optional), <filedesc>(required), <encodingdesc>(optional), <profiledesc>(optional), and <revisiondesc>(optional). These elements and their sub-elements provide: a unique identifier for the MEI file, bibliographic information about the MEI file and its sources, information about the encoding process, information about the creation of the work being encoded, and statements regarding significant revisions of the file. The *xml:lang* attribute may be used to indicate the language in which the metadata content of the header is provided. In order to encourage uniformity in the provision of metadata across document types, this element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[altmeiid](#), [encodingdesc](#), [filedesc](#), [profiledesc](#), [revisiondesc](#)

### **May occur within:**

[mei](#), [meicorpus](#)

## Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **meiversion**, optional, xs:token, 1.9b  
records the version of MEI used by the file.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **type**, optional, xs:token, music, corpus  
specifies the kind of document to which the header is attached, that is, whether it is a corpus or an individual text.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

## **<mensur> mensuration**

## Description:

The <mensur> element is provided for the encoding of mensural notation. It collects information about the metrical relationship between a note value and the next smaller value; that is, either triple or duple. The slash attribute indicates the number lines added to the mensuration sign. For example, one slash is added for what we now call 'alla breve'.

## May contain:

EMPTY

## May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [staffdef](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

## Attributes:

- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- dot, optional, xs:token, true, false  
specifies whether a dot is to be added to the base symbol.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- form, optional, xs:token, horizontal, vertical  
indicates whether the base symbol is written vertically or horizontally.
- loc, optional, xs:nonNegativeInteger  
holds the staff location of the feature.
- modusmaior, optional, xs:positiveInteger, 2 - 3  
describes the maxima-long relationship.
- modusminor, optional, xs:positiveInteger, 2 - 3  
describes the long-breve relationship.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, optional, xs:positiveInteger  
along with numbase, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- numbase, optional, xs:positiveInteger  
along with num, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- orient, optional, xs:token, "reversed|90CW|90CCW"  
describes the rotation or reflection of the base symbol.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- prolatio, optional, xs:positiveInteger, 2 - 3  
describes the semibreve-minim relationship.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- sign, optional, xs:token, C, O  
the base symbol in the mensuration sign/time signature of mensural notation.
- size, optional, xs:token, normal, cue  
describes the relative size of a feature.
- slash, optional, xs:positiveInteger, 1 - 6  
indicates the number of slashes to be rendered along with the feature.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tempus, optional, xs:positiveInteger, 2 - 3  
describes the breve-semibreve relationship.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.



**Module:**

mensural

**<metatext> meta text**

**Description:**

MIDI text meta-event.

**May contain:**

EMPTY

**May occur within:**

[midi](#)

**Attributes:**

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

midi

## **<midi> midi**

### **Description:**

Container for elements that contain information useful when generating MIDI output. The n attribute can be used to differentiate between multiple MIDI data streams, e.g. quantized/unquantized, straight/swing, ornamented/as notated, etc.

### **May contain:**

[cc](#), [chan](#), [chanpr](#), [cue](#), [hex](#), [marker](#), [metatext](#), [noteoff](#), [noteon](#), [port](#), [prog](#), [seqnum](#), [trkname](#), [vel](#)

### **May occur within:**

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### **Attributes:**

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

midi

## **<mordent> mordent**

### **Description:**

An ornament indicating rapid alternation of the main note with a secondary note, usually a step below, but sometimes a step above. See Read, p. 245-246. Events may be contained within <mordent> in order to record

precise performance data. The starting point of the mordent may be indicated by either a `tstamp`, `tstamp.ges`, `tstamp.real` or `startid` attribute. It is a semantic error not to specify a starting point attribute.

### May contain:

[barline](#), [beam](#), [beatrpt](#), [bend](#), [btrem](#), [chord](#), [clefchange](#), [custos](#), [ftrem](#), [gliss](#), [halfmrpt](#), [keysig](#), [ligature](#), [mensur](#), [note](#), [pad](#), [proport](#), [rest](#), [space](#), [tuplet](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- `accidlower`, optional, `xs:token`, `s`, `f`, `ss`, `x`, `ff`, `xs`, `tb`, `n`, `nf`, `ns`, `su`, `sd`, `fu`, `fd`, `nu`, `nd`  
records the written accidental associated with a lower neighboring note.
- `accidupper`, optional, `xs:token`, `s`, `f`, `ss`, `x`, `ff`, `xs`, `tb`, `n`, `nf`, `ns`, `su`, `sd`, `fu`, `fd`, `nu`, `nd`  
records the written accidental associated with an upper neighboring note.
- `color`, optional, `xs:token`, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `endid`, optional, `xs:IDREF`  
indicates the final element in a sequence of events to which the feature applies.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `form`, optional, `xs:token`, `inv`, `norm`  
'norm' signals the normal form, that is, the written note, followed by its lower neighbor, with a return to the written note, while 'inv' indicates the inverted form, that is, the principal note, followed by its upper neighbor, with a return to the principal note. Traditionally, the 'normal' mordent is written as a short wavy line with a vertical line through it and the inverted mordent is written without the vertical line. However, the meaning of these signs is sometimes reversed. See Read, p. 245-246. Another attribute in the visual domain would be necessary in order to be completely explicit about which visual symbol is actually to be rendered.
- `ho`, optional, `xs:decimal`  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- `layer`, optional, list of `xs:positiveInteger`, minimum length of 1  
signifies the layer within which a control event is active.
- `long`, optional, `xs:token`, `true`, `false`  
When the long attribute is set to 'yes', a double or long mordent, consisting of 5 notes, is indicated.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `next`, optional, `xs:IDREFS`  
used to point to the next event(s) in a user-defined collection.
- `place`, optional, `xs:token`, `above`, `below`, `within`  
captures the placement of the item with respect to the staff with which it is associated.

- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmnOrnaments

## **<mrest> *measure rest***

## Description:

Complete measure rest in any meter (Read, p. 97-98). Automatically-generated numbering of consecutive measures of rest may be controlled via the multi.number attribute on the scoredef or staffdef elements.

## May contain:

EMPTY

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [unclear](#)

## Attributes:

- **altsym**, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **cutout**, optional, xs:token, cutout  
Presence of the cutout attribute indicates that the staff lines should not be drawn for the measure containing this element.
- **dur**, optional, xs:token, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
records the duration of a feature using the relative durational values provided by the data.DURATION datatype.
- **dur.ges**, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **fermata**, optional, xs:token, above, below, within  
indicates the attachment of a fermata to this element. If visual information about the fermata needs to be recorded, then a <fermata> element should be employed instead.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **instr**, optional, xs:IDREF  
provides a way of pointing to a MIDI instrument definition. It must contain the ID of an <instrdef> element elsewhere in the document.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **size**, optional, xs:token, normal, cue  
describes the relative size of a feature.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.

- to, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- visible, optional, xs:boolean, true, false  
indicates if a feature should be rendered when the notation is presented graphically or sounded.
- vo, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facts attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facts attribute.

## Module:

cmn

## **<mrpt> measure repeat**

## Description:

An indication that the previous measure should be repeated. The automated numbering of consecutive measures of rest may be controlled via the multi.number attribute on the scoredef or staffdef elements.

## May contain:

EMPTY

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [unclear](#)

## Attributes:

- altsym, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"

used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- expand, optional, xs:boolean, true, false  
indicates whether to render a repeat symbol or the source material to which it refers.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn

## Illustration:



## **<mrpt2> 2-measure repeat**

### **Description:**

An indication that the previous two measures should be repeated.

### **May contain:**

EMPTY

### **May occur within:**

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [unclear](#)

### **Attributes:**

- **altsym**, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **expand**, optional, xs:token, true, false  
indicates whether to render a repeat symbol or the source material to which it refers.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.

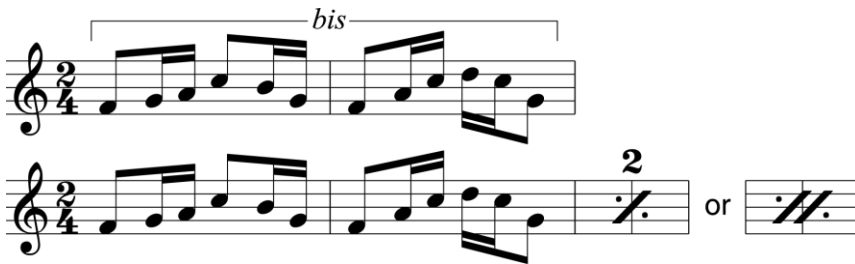


- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn

## Illustration:



## **<mspace> measure space**

### Description:

Complete measure consisting of empty space in any meter. The automated numbering of consecutive measures of space may be controlled via the `multi.number` attribute on the `scoredef` or `staffdef` elements.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [unclear](#)

### Attributes:

- `altsym`, optional, `xs:IDREF`  
provides a way of pointing to a user-defined symbol. It must contain an ID of a `<symboldef>` element elsewhere in the document.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `cutout`, optional, `xs:token`, `cutout`  
Presence of the `cutout` attribute indicates that the staff lines should not be drawn for the measure containing this element.
- `dur`, optional, `xs:token`, `long`, `breve`, `1`, `2`, `4`, `8`, `16`, `32`, `64`, `128`, `256`, `512`, `1024`, `2048`, `maxima`, `longa`, `brevis`, `semibrevis`, `minima`, `semiminima`, `fusa`, `semifusa`

records the duration of a feature using the relative durational values provided by the data.DURATION datatype.

- dur.ges, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- fermata, optional, xs:token, above, below, within  
indicates the attachment of a fermata to this element. If visual information about the fermata needs to be recorded, then a <fermata> element should be employed instead.
- instr, optional, xs:IDREF  
provides a way of pointing to a MIDI instrument definition. It must contain the ID of an <instrdef> element elsewhere in the document.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- visible, optional, xs:token, true, false  
indicates if a feature should be rendered when the notation is presented graphically or sounded.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

cmn

## Illustration:



## **<multiest> multi-rest**

### Description:

Multiple measures of rest compressed into a single symbol, frequently found in performer parts. The num attribute can be used to store a number to be rendered along with the note. See Read, p. 102-105.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [unclear](#)

### Attributes:


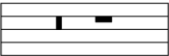



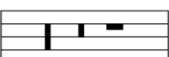
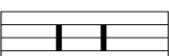
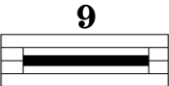
- altsym, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- block, optional, xs:boolean, true, false  
When the block attribute is used, combinations of the 1, 2, and 4 measure rest forms (Read, p. 104) should be rendered instead of the modern form or the alternative symbol.
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- dur.ges, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- instr, optional, xs:IDREF  
provides a way of pointing to a MIDI instrument definition. It must contain the ID of an <instrdef> element elsewhere in the document.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **num**, optional, xs:positiveInteger  
used to store a number to be rendered along with a feature.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn

## Illustration:

2 measures		double whole-rest in third space
3 measures		two-measure rest plus whole rest
4 measures		two double whole-rests joined as one in second and third spaces
5 measures		four-measure rest plus whole rest
6 measures		four-measure rest plus two-measure rest
7 measures		four-measure rest plus two-measure rest plus whole rest
8 measures		two four-measure rests
9 measures and longer		thick horizontal bar on third line with vertical ends plus large numeral above or below staff

## <multirpt> multi-repeat

### Description:

Multiple repeated measures. In modern publishing practice, repeats of more than two measures should be written out using repeat signs. This element, however, is provided for handling non-standard practices often found in manuscript. The num attribute records the number of measures to be repeated.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [unclear](#)

### Attributes:

- altsym, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.

- **expand**, optional, xs:token, true, false  
indicates whether to render a repeat symbol or the source material to which it refers.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **num**, optional, xs:positiveInteger  
used to store a number to be rendered along with a feature.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn

## Illustration:



**<music> music**

## Description:

Container for everything else in the document apart from the header.

## May contain:

[body](#), [facsimile](#), [front](#), [group](#)

## May occur within:

[group](#), [mei](#)

## Attributes:

- **meiversion**, optional, xs:token, 1.9b  
records the version of MEI used by the file.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## **<name>** *name*

## Description:

Contains the name of an entity that is difficult to tag more specifically as a <corpname>, <geogname>, <persname>, or <title>. The <name> element may be used in place of the more specific elements when it is not known what kind of name is being described or when a high degree of precision is not necessary. For example, the <name> element might be used when it is not clear whether the name "Bach" refers to a person or a geographic feature. The <name> element may be used for an individual, such as 'Henry VIII, King of England'; a corporate body, such as 'The Beatles'; a geographical place; or a generative mechanical process. When name parts are needed, use <name> sub-elements. The recommended values for the type attribute are: pers, corp, place, process. The <date> sub-element is available within <name> in order to record any dates, associated with the name, i.e., birth and death in the case of persons or creation and dissolution in the case of a corporate entity or place. The name of the list from which a controlled value is taken, such as the Thesaurus of Geographic Names (TGN) or Library of Congress Name Authority File (LCNAF), may be recorded using the authority attribute. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [application](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [respstmt](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **authority**, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- **dbkey**, optional, xs:NMTOKEN  
used to record a value which serves as a primary key in an external database.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **nymref**, optional, xs:IDREF  
used to record a pointer to the regularized form of the name.
- **role**, optional, CDATA  
used to specify further information about the entity referenced by this name, for example, the occupation of a person or the status of a place.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## **<normalization> normalization**

## Description:

Indicates the extent of normalization or regularization of the original source carried out in converting it to electronic form. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[p](#)

## May occur within:

[editorialdecl](#)



## Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **method**, optional, xs:token, silent, tags  
indicates the method employed to mark corrections and normalizations.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

## **<note> note**

## Description:

A single pitched event. (Read, p. 63) The note element is allowed to contain other events for situations where a single (usually ornamented) written note is representative of a group of performed notes. The accid and artic sub-elements may be used instead of the note element's attributes when accid and artic represent first-class objects, e.g., when they require attributes, such as x and y location attributes. Similarly, the syl sub-element may be used instead of the syl attribute. The verse sub-element may be used to group text syllables by verse. The colored attribute may be used to indicate coloration. In the mensural repertoire, coloration is a temporary change in the underlying mensuration from perfect to imperfect. In the CMN repertoire, coloration is an inversion of the note head's normal rendition, that is, the notehead is void when it would otherwise be filled and vice versa. Do not confuse this with visual color.

## May contain:

[accid](#), [add](#), [app](#), [artic](#), [barline](#), [beam](#), [beatrpt](#), [bend](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corr](#), [custos](#), [damage](#), [del](#), [dot](#), [ftrem](#), [gap](#), [gliss](#), [halfmrpt](#), [handshift](#), [keysig](#), [ligature](#), [mensur](#), [note](#), [orig](#), [pad](#), [proport](#), [reg](#), [rest](#), [restore](#), [sic](#), [space](#), [subst](#), [supplied](#), [syl](#), [tuplet](#), [unclear](#), [verse](#)

## May occur within:

[add](#), [beam](#), [bend](#), [btrem](#), [chord](#), [corr](#), [damage](#), [del](#), [ftrem](#), [gliss](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

## Attributes:

- **accid**, optional, xs:token, s, f, ss, x, ff, xs, tb, n, nf, ns, su, sd, fu, fd, nu, nd  
captures a written accidental.
- **accid.ges**, optional, xs:token, s, f, ss, ff, n  
records the performed pitch inflection when it differs from the written accidental.
- **altsym**, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- **artic**, optional, list of xs:token, acc, stacc, ten, stacciss, marc, marc-stacc, acc-marc, spicc, rip, doit, plop, fall, bend, flip, smear, dnbow, upbow, harm, snap, fingernail, ten\_stacc, damp, dampall, open, stop, dbltongue, trpltongue, heel, toe, tap, lhpizz, dot, stroke, minimum length of 1  
encodes the written articulation(s). Articulations are normally encoded in order from the notehead outward; that is, away from the stem. See additional notes at att.vis.note. Only articulations should be encoded in the artic attribute; fingerings should be encoded using the <dir> element.
- **artic.ges**, optional, list of xs:token, acc, stacc, ten, stacciss, marc, marc-stacc, acc-marc, spicc, rip, doit, plop, fall, bend, flip, smear, dnbow, upbow, harm, snap, fingernail, ten\_stacc, damp, dampall, open, stop, dbltongue, trpltongue, heel, toe, tap, lhpizz, dot, stroke, minimum length of 1  
records performed articulation that differs from the written value.
- **beam**, optional, list of xs:token, "[i|m|t][1-6]", minimum length of 1  
indicates that this event is "under a beam".
- **breaksec**, optional, xs:positiveInteger  
presence of this attribute indicates that the secondary beam should be broken following this note/chord. The value of the attribute records the number of beams which should remain unbroken.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **colored**, optional, xs:token, true, false  
indicates this feature is 'colored'; that is, it is a participant in a change in rhythmic values. In mensural notation, coloration is indicated by colored notes (red, black, etc.) where void notes would otherwise occur. In CMN notation, coloration is indicated by an inverse color; that is, the notehead is void when it would otherwise be filled and vice versa.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **dots**, optional, xs:nonNegativeInteger, 0 - 4  
records the number of augmentation dots required by a dotted duration.
- **dur**, optional, xs:token, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
records the duration of a feature using the relative durational values provided by the data.DURATION datatype.
- **dur.ges**, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **enclose**, optional, xs:token, paren, brack  
records the characters often used to mark accidentals, articulations, and sometimes notes as having a cautionary or editorial function. For an example of cautionary accidentals enclosed in parentheses, see Read, p. 131, ex. 9-14.

- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **fermata**, optional, **xs:token**, above, below, within  
indicates the attachment of a fermata to this element. If visual information about the fermata needs to be recorded, then a <fermata> element should be employed instead.
- **gliss**, optional, **xs:token**, i, m, t  
indicates that this element participates in a glissando.
- **grace**, optional, **xs:token**, acc, unacc, unknown  
marks a note or chord as a "grace" (without a definitive written duration) and records from which other note/chord it should "steal" time.
- **grace.time**, optional, **xs:token**, "[0-9]+(\.[0-9]\*)?%"  
records the amount of time to be "stolen" from a non-grace note/chord.
- **headshape**, optional, **xs:token**, quarter, half, whole, dblwhole, filldiamond, diamond, dwdiamond, fillisotriangle, isotriangle, dwhisotriangle, fillpiewedge, piewedge, dwhpiewedge, fillrectangle, rectangle, dwhrectangle, fillrtriangle, rtriangle, dwrtriangle, fillurtriangle, urtriangle, dwurtriangle, fillsemicircle, semicircle, dwsemicircle, fillslash, slash, dwslash, x, blank, circlex, cross  
used to override the headshape normally used for the given duration.
- **hfunc**, optional, **xs:NMTOKEN**  
describes harmonic function in any convenient typology.
- **ho**, optional, **xs:decimal**  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **instr**, optional, **xs:IDREF**  
provides a way of pointing to a MIDI instrument definition. It must contain the ID of an <instrdef> element elsewhere in the document.
- **inth**, optional, **xs:NMTOKENS**  
encodes the harmonic interval between this note and other pitches occurring at the same time.
- **intm**, optional, **xs:NMTOKEN**  
encodes the melodic interval from the previous pitch.
- **layer**, optional, **xs:positiveInteger**  
identifies the layer to which a feature applies.
- **lig**, optional, **xs:token**, recta, obliqua  
indicates this element's participation in a ligature.
- **lv**, optional, **xs:token**, true, false  
indicates the attachment of an l.v. (laissez vibrer) sign to this element.
- **mfunc**, optional, **xs:NMTOKEN**  
describes melodic function in any convenient typology.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, **xs:IDREFS**  
used to point to the next event(s) in a user-defined collection.
- **num**, optional, **xs:positiveInteger**  
along with numbase, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- **numbase**, optional, **xs:positiveInteger**  
along with num, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- **oct**, optional, **xs:nonNegativeInteger**, 0 - 9  
captures written octave information.

- `oct.ges`, optional, `xs:nonNegativeInteger`, 0 - 9  
records performed octave information that differs from the written value.
- `pclass`, optional,  
holds pitch class information.
- `pname`, optional, `xs:token`, "[a-g]"  
contains a written pitch name.
- `pname.ges`, optional, `xs:token`, "[a-g]|none"  
records pitch name information that differs from the written value.
- `pnum`, optional, `xs:nonNegativeInteger`  
holds a pitch-to-number mapping, a base-40 or MIDI note number, for example.
- `prev`, optional, `xs:IDREFS`  
points to the previous event(s) in a user-defined collection.
- `psolfa`, optional, `CDATA`  
contains solfa designation, e.g., do, re, mi, etc., in either a fixed or movable Do system.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `size`, optional, `xs:token`, normal, cue  
describes the relative size of a feature.
- `slur`, optional, list of `xs:token`, "[i|m|t][1-6]", minimum length of 1  
indicates that this element participates in a slur.
- `staff`, optional, list of `xs:positiveInteger`, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- `stem.dir`, optional, `xs:token`, up, down  
describes the direction of a stem.
- `stem.len`, optional, `xs:decimal`  
encodes the stem length.
- `stem.mod`, optional, `xs:token`, 1slash, 2slash, 3slash, 4slash, 5slash, 6slash, sprech, z  
encodes any stem "modifiers"; that is, symbols rendered on the stem, such as tremolo or Sprechstimme indicators.
- `stem.pos`, optional, `xs:token`, left, right, center  
records the position of the stem in relation to the notehead(s).
- `stem.with`, optional, `xs:token`, above, below  
contains an indication of which staff a note or chord that logically belongs to the current staff should be visually placed on; that is, the one above or the one below.
- `stem.x`, optional, `xs:decimal`  
records the output x coordinate of the stem's attachment point.
- `stem.y`, optional, `xs:decimal`  
records the output y coordinate of the stem's attachment point.
- `syl`, optional, `CDATA`  
holds an associated sung text syllable.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `tab.fret`, optional, `xs:nonNegativeInteger`, `xs:token`  
records the fret at which a string should be stopped.
- `tab.string`, optional, `xs:positiveInteger`  
records which string is to be played.
- `tie`, optional, `xs:token`, "[i|m|t]"  
indicates that this element participates in a tie. If visual information about the tie needs to be recorded, then a `<tie>` element should be employed.

- to, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tuplet, optional, list of xs:token, "[i|m|t][1-6]", minimum length of 1  
indicates that this feature participates in a tuplet.
- visible, optional, xs:token, true, false  
indicates if a feature should be rendered when the notation is presented graphically or sounded.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

### Module:

shared

### **<noteoff> note-off**

### Description:

MIDI note-off event.

### May contain:

EMPTY

### May occur within:

[midi](#)

### Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.

- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, **xs:IDREFS**  
used to point to the next event(s) in a user-defined collection.
- **num**, required, **xs:nonNegativeInteger**, 0 - 127  
records a MIDI number.
- **prev**, optional, **xs:IDREFS**  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, **xs:IDREFS**  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of **xs:positiveInteger**, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, **xs:IDREFS**  
points to elements that are synchronous with the current element.
- **tstamp**, optional, **xs:decimal**, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

midi

## **<noteon> note-on**

## Description:

MIDI note-on event.

## May contain:

EMPTY

## May occur within:

[midi](#)

## Attributes:

- **copyof**, optional, **xs:IDREF**  
points to an element of which the current element is a copy.
- **corresp**, optional, **xs:IDREFS**  
used to point to other elements that correspond to this one in a generic fashion.
- **layer**, optional, **xs:positiveInteger**  
identifies the layer to which a feature applies.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, **xs:IDREFS**  
used to point to the next event(s) in a user-defined collection.

- num, required, xs:nonNegativeInteger, 0 - 127  
records a MIDI number.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

midi

## **<notesstmt> notes statement**

## Description:

Groups bibliographic annotations, each of which provides descriptive information in addition to that recorded in other parts of the bibliographic description. These annotations are similar to "general notes" in traditional bibliographic descriptions. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[annot](#)

## May occur within:

[filedesc](#), [source](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

**Module:**

header

**<num> number**

**Description:**

Numeric information in any form. This element is used only when it is necessary to display a number in a special way or to identify it with a type attribute.

**May contain:**

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

**May occur within:**

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

**Attributes:**

- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `unit`, optional, `xs:NMTOKEN`  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

shared



## <octave> octave

### Description:

An indication that a passage should be performed one or more octaves above or below its written pitch. The `dis` and `dis.place` attributes record the amount and direction of displacement, respectively. The `rend` attribute captures the appearance of the continuation line associated with the octave displacement. The starting point of the octave displacement may be indicated by either a `tstamp`, `tstamp.ges`, `tstamp.real` or `startid` attribute, while the ending point may be recorded by either a `dur`, `dur.ges` or `endid` attribute. It is a semantic error not to specify one starting and one ending type of attribute. Please note that the `dur` attribute here is not a true duration, but rather a time stamp for the end point of the octave displacement. Also, note that the `dur` attribute is not required because the octave displacement can be visually instantaneous.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- `coll`, optional, `xs:token`, `coll`  
indicates whether the octave displacement should be performed simultaneously with the written notes, i.e., 'coll' ottava'. Unlike other octave signs which are indicated by broken lines, coll' ottava uses an unbroken line or a series of longer broken lines, ending with a short vertical stroke. See Read, p. 47-48.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `dis`, optional, `xs:positiveInteger`, "([\\-+]?[0-9]+) & (8|15|22)"  
records the amount of octave displacement.
- `dis.place`, optional, `xs:token`, `above`, `below`  
records the direction of octave displacement.
- `dur`, optional, `xs:token`, "([0-9]+m \*\\+ \*)?[0-9]+(\\.?[0-9]\*)?"  
encodes the duration of a feature as a timestamp for its endpoint rather than as a relative durational value.
- `dur.ges`, optional, `CDATA`  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as `measures[s]+ beat[s].beatpart`, `ppq` (MIDI clicks), Humdrum `**recip` values, or MusicXML 'divisions', etc.
- `endho`, optional, `xs:decimal`  
records the horizontal adjustment of a feature's programmatically-determined end point.
- `endid`, optional, `xs:IDREF`  
indicates the final element in a sequence of events to which the feature applies.
- `endto`, optional, `xs:decimal`  
records a timestamp adjustment of a feature's programmatically-determined end point.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.

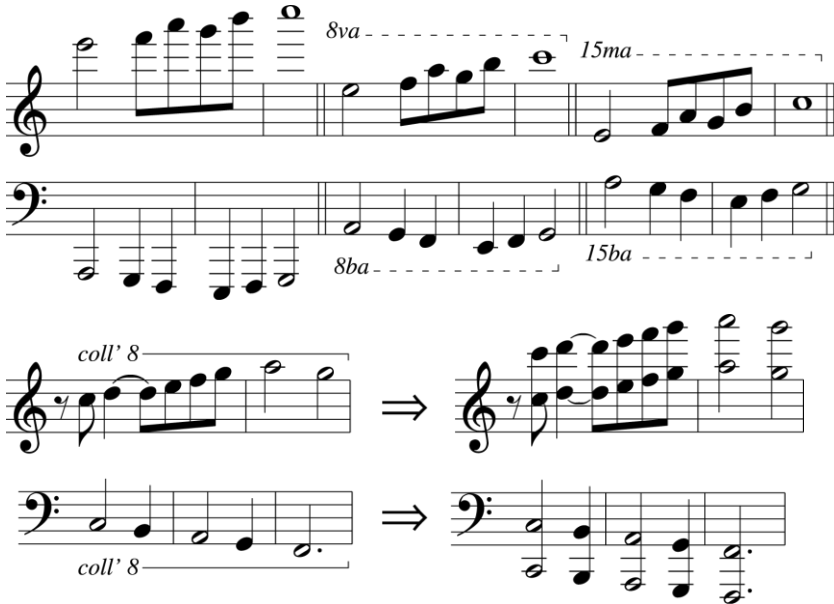
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **rend**, optional, xs:token, narrow, medium, wide, dashed, dotted, wavy  
records the appearance of a line.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac** attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facts attribute.

## Module:

cmn

## Illustration:



## <orig> original

### Description:

Contains a reading which is marked as following the original, rather than being normalized or corrected. This element will often be combined with a regularized form within a choice element. The editor(s) responsible for asserting that the material is original may be recorded in the resp attribute. The value of resp must point to one or more identifiers declared in the document header. The cert attribute signifies the degree of certainty ascribed to the transcription of the original text. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspace](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

## May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [choice](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

## Attributes:

- `cert`, optional, `xs:token`, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- `evidence`, optional, `xs:NMTOKEN`  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `resp`, optional, `xs:IDREFS`  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- `source`, optional, `xs:IDREFS`  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a `<source>` element located in the document header.
- `subtype`, optional, `xs:NMTOKEN`  
provide any sub-classification for the element, additional to that given by its type attribute.
- `type`, optional, `xs:NMTOKEN`  
characterizes the element in some sense, using any convenient classification scheme or typology.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

**<ossia> *ossia***

## Description:

An alternative, usually simpler, version of a measure \*present in the source being transcribed\*. Typically, it is rendered above the staff on a reduced-size staff.

## May contain:

[add](#), [anchoredtext](#), [annot](#), [app](#), [arpeg](#), [beamspan](#), [breath](#), [choice](#), [corr](#), [curve](#), [damage](#), [del](#), [dir](#), [div](#), [dynam](#), [fermata](#), [gap](#), [hairpin](#), [handshift](#), [harm](#), [harppedal](#), [line](#), [lyrics](#), [midi](#), [mordent](#), [octave](#), [orig](#), [ossia](#), [pb](#), [pedal](#), [phrase](#), [reg](#), [reh](#), [restore](#), [sb](#), [scoredef](#), [sic](#), [slur](#), [staff](#), [staffdef](#), [staffgrp](#), [subst](#), [supplied](#), [symbol](#), [tempo](#), [tie](#), [trill](#), [tupletspan](#), [turn](#), [unclear](#)

## May occur within:

[lem](#), [measure](#), [ossia](#), [rdg](#)

## Attributes:

- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

cmn

## **<p> paragraph**

## Description:

One or more text phrases that form a logical prose passage. A paragraph is usually typographically distinct: The text usually begins on a new line and the first letter of the content is often indented, enlarged, or both. This element is modelled on elements in Encoded Archival Description, Text Encoding Initiative (TEI), and HTML.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [list](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

## May occur within:

[annot](#), [application](#), [blockquote](#), [changedesc](#), [correction](#), [creation](#), [div](#), [editorialdecl](#), [figdesc](#), [fw](#), [interpretation](#), [item](#), [lem](#), [normalization](#), [pgdesc](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [projectdesc](#), [rdg](#), [samplingdecl](#), [segmentation](#), [stdvals](#), [td](#), [th](#), [titlepage](#)

### Attributes:

- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **x**, optional, **xs:decimal**  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.
- **y**, optional, **xs:decimal**  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.

### Module:

shared

**<pad> pad**

### Description:

An indication of extra visual space between notational elements.

### May contain:

EMPTY

### May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

### Attributes:

- **layer**, optional, **xs:positiveInteger**  
identifies the layer to which a feature applies.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **num**, required, **xs:decimal**  
captures the amount of horizontal space to be added, expressed in one-half inter-line staff distance units.
- **staff**, optional, list of **xs:positiveInteger**, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **tstamp**, optional, **xs:decimal**, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]

- `tstamp.ges`, optional, `xs:nonNegativeInteger`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## **<part> part**

## Description:

An alternative visual rendition of the score from a particular performer's point of view. Part elements are not used in the score to indicate voice leading. Next attributes on event elements should be used for this purpose. Part elements are useful for encoding individual parts when there is no score, such as early music part books, when the music has non-aligning barlines, when different layout, such as page turns, are needed for the score and parts, or for accommodating software that requires part-by-part encoding. When assembly of the parts into a score is desired and there are non-aligning barlines, barlines which indicate points of alignment across all the parts may be marked as 'controlling', while non-aligning ones may be marked as 'non-controlling'.

## May contain:

[ending](#), [section](#)

## May occur within:

[parts](#)

## Attributes:

- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `next`, optional, `xs:IDREFS`  
used to point to the next event(s) in a user-defined collection.
- `prev`, optional, `xs:IDREFS`  
points to the previous event(s) in a user-defined collection.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `subtype`, optional, `xs:NMTOKEN`  
provide any sub-classification for the element, additional to that given by its type attribute.

- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `type`, optional, `xs:NMTOKEN`  
characterizes the element in some sense, using any convenient classification scheme or typology.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

shared

## **<parts> parts**

## Description:

Gathers performers' parts.

## May contain:

[part](#)

## May occur within:

[mdiv](#)

## Attributes:

- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `next`, optional, `xs:IDREFS`  
used to point to the next event(s) in a user-defined collection.
- `prev`, optional, `xs:IDREFS`  
points to the previous event(s) in a user-defined collection.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `subtype`, optional, `xs:NMTOKEN`  
provide any sub-classification for the element, additional to that given by its type attribute.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `type`, optional, `xs:NMTOKEN`  
characterizes the element in some sense, using any convenient classification scheme or typology.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.



## Module:

shared

## <pb> page break

## Description:

The *n* attribute records the page number in the source. It need not be an integer, e.g. 'iv', or 'p17-3'. The logical page number can be calculated by counting previous <pb> ancestor elements. When used in a score context, a page break implies an accompanying system break. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[fw](#), [pgdesc](#)

## May occur within:

[abbr](#), [add](#), [addressline](#), [annot](#), [back](#), [bibl](#), [caption](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [div](#), [ending](#), [expan](#), [extref](#), [front](#), [geogname](#), [head](#), [identifier](#), [item](#), [l](#), [layer](#), [lem](#), [measure](#), [name](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [rdg](#), [ref](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [stack](#), [staff](#), [stylename](#), [supplied](#), [syllable](#), [td](#), [th](#), [title](#), [titlepage](#), [unclear](#)

## Attributes:

- *entityref*, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- *facs*, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- *func*, optional, xs:token, verso, recto  
states the side of a leaf (as in a manuscript) on which the content following the <pb> element occurs.
- *n*, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- *source*, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- *targettype*, optional, xs:NMTOKEN  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- *xlink:actuate*, optional, xs:token, onLoad, onRequest, other, none  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the show attribute to determine link behavior.
- *xlink:href*, optional, xs:anyURI  
allows the use of an previously-undeclared URI to identify an external electronic object.
- *xlink:role*, optional, xs:anyURI  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.

- `xlink:show`, optional, `xs:token`, new, replace, other, none  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- `xlink:title`, optional, CDATA  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

shared

**<pedal> pedal**

### Description:

Piano pedal mark (Read, p. 317-318). The starting point of the pedal mark may be indicated by either a `tstamp`, `tstamp.ges`, `tstamp.real` or `startid` attribute. It is a semantic error not to specify a starting point attribute.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- `color`, optional, `xs:token`, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `dir`, required, `xs:token`, down, up, half, bounce  
records the position of the piano damper pedal.
- `endid`, optional, `xs:IDREF`  
indicates the final element in a sequence of events to which the feature applies.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `ho`, optional, `xs:decimal`  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- `layer`, optional, list of `xs:positiveInteger`, minimum length of 1  
signifies the layer within which a control event is active.

- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **place**, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **style**, optional, xs:token, line, pedstar, altpedstar  
When style is set to 'line', the pedal mark is rendered with a continuous line. When it's set to pedstar, a pedal down and a half pedal are rendered with "Ped.", a pedal up is rendered as "\*", and a pedal "bounce" (up then immediately down) is rendered with "\* Ped.". When set to altpedstar, pedal up and down indications are the same as with pedstar but a bounce is rendered with "Ped." only.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

cmn

**<periodname> *period name***

## Description:

A label that describes a period of time, such as 'Baroque' or '3rd Style period'. The name of the list from which a controlled value is taken may be recorded using the authority attribute.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- authority, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- cert, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- dbkey, optional, xs:NMTOKEN  
used to record a value which serves as a primary key in an external database.
- enddate, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the end point of a date range.
- evidence, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- **notafter**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains an upper boundary for an uncertain date.
- **notbefore**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains a lower boundary for an uncertain date.
- **nymref**, optional, xs:IDREF  
used to record a pointer to the regularized form of the name.
- **reg**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
gives the value of a date in standard ISO form.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **role**, optional, CDATA  
used to specify further information about the entity referenced by this name, for example, the occupation of a person or the status of a place.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **startdate**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the starting point of a date range.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

namesdates

## **<persname> *personal name***

## Description:

Designation for an individual, including any or all of that individual's forenames, surnames, honorific titles, and added names. Name sub-parts may be recorded in <persname> sub-elements. The name of the list from which a controlled value is taken may be recorded using the authority attribute. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [respstmt](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **authority**, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- **cert**, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- **dbkey**, optional, xs:NMTOKEN  
used to record a value which serves as a primary key in an external database.
- **enddate**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains the end point of a date range.
- **evidence**, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **notafter**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains an upper boundary for an uncertain date.
- **notbefore**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
contains a lower boundary for an uncertain date.
- **nymref**, optional, xs:IDREF  
used to record a pointer to the regularized form of the name.
- **reg**, optional, xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, xs:token  
gives the value of a date in standard ISO form.

- **resp**, optional, **xs:IDREFS**  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **role**, optional, **CDATA**  
used to specify further information about the entity referenced by this name, for example, the occupation of a person or the status of a place.
- **source**, optional, **xs:IDREFS**  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a `<source>` element located in the document header.
- **startdate**, optional, **xs:date**, **xs:gYear**, **xs:gMonth**, **xs:gDay**, **xs:gYearMonth**, **xs:gMonthDay**, **xs:time**, **xs:dateTime**, **xs:token**  
contains the starting point of a date range.
- **subtype**, optional, **xs:NMTOKEN**  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, **xs:NMTOKEN**  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

namesdates

## **<pgdesc>** *page description*

### Description:

Contains a brief prose description of the appearance or description of the content of a physical page. Best practice suggests the use of controlled vocabulary. Don't confuse this element with a figure caption. A caption is text primarily intended for display with an illustration. It may or may not function as a description of the illustration.

### May contain:

PCDATA, [anchoredtext](#), [annot](#), [blockquote](#), [curve](#), [extptr](#), [extref](#), [lg](#), [line](#), [list](#), [p](#), [ptr](#), [ref](#), [symbol](#), [table](#)

### May occur within:

[pb](#)

### Attributes:

- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## <pgfoot1> page footer 1

## Description:

A running footer on the first page. This element is a specialized form of the **fw** element. Auto-generated page numbers may be indicated with a processing instruction. The **pgheadN** and **pgfootN** elements should *\*not\** be used to encode textual notes/annotations.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [app](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [lg](#), [list](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

## May occur within:

[scoredef](#)

## Attributes:

- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared



## **<pgfoot2> page footer 2**

### **Description:**

A running header on the pages following the first. This element is a specialized form of the fw element. Auto-generated page numbers may be indicated with a processing instruction. The pgheadN and pgfootN elements should *\*not\** be used to encode textual notes/annotations.

### **May contain:**

PCDATA, [abbr](#), [add](#), [address](#), [app](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [lg](#), [list](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

### **May occur within:**

[scoredef](#)

### **Attributes:**

- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### **Module:**

shared

## **<pghead1> page header 1**

### **Description:**

A running header on the first page. This element is a specialized form of the fw element for capturing the table-formatted textual data that often appears on the first page of printed music. It may also be used for similarly formatted material in manuscripts. The pgheadN and pgfootN elements should *\*not\** be used to encode textual notes/annotations. Auto-generated page numbers may be indicated with a processing instruction.

### **May contain:**

PCDATA, [abbr](#), [add](#), [address](#), [app](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [lg](#), [list](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

## May occur within:

[scoredef](#)

## Attributes:

- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## **<pghead2>** *page header 2*

## Description:

A running header on the pages following the first. This element is a specialized form of the **fw** element. The **pgheadN** and **pgfootN** elements should *\*not\** be used to encode textual notes/annotations. Auto-generated page numbers may be indicated with a processing instruction.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [app](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expansion](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [lg](#), [list](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

## May occur within:

[scoredef](#)

## Attributes:

- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags'

as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## <phrase> phrase

## Description:

Historically, a phrase mark indicated a "unified melodic idea", while the term "slur" was used for two-note legato patterns. (Read, p. 265). Nowadays, however, "phrase" and "slur" are often used interchangeably (Read, p. 265-266), since the visual rendition of the two concepts is the same. MEI provides two distinct elements so that those users wishing to maintain a distinction for historical reasons may do so. If the user does not want to maintain the distinction, then the more generic <slur> element should be employed. The starting point of the phrase may be indicated by either a tstamp, tstamp.ges, tstamp.real or startid attribute, while the ending point may be recorded by either a dur, dur.ges or endid attribute. It is a semantic error not to specify one starting and one ending type of attribute. Either place, bulge, or bezier attributes may be used to record the curvature of the phrase. Please note that the dur attribute here is not a true duration, but rather a time stamp for the end point of the phrase mark.

## May contain:

EMPTY

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

- bezier, optional, list of xs:integer, minimum length of 1  
records the placement of Bezier control points as a series of space-separated xy coordinates, eg. 19 45 - 32 118.
- bulge, optional, list of xs:decimal, minimum length of 1  
describes a curve as a set of distance values above or below an imaginary line connecting the endpoints of the curve. The bulge attribute must contain one or more decimal values expressed in inter-line units.
- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- curvedir, optional, xs:token, above, below  
describes a curve with a generic term indicating whether the curve bows upward or downward. Upward curves go above the items they cover, while downward curves go under them.
- dur, optional, xs:token, "([0-9]+m \*|+ \*)?[0-9]+(\.?[0-9]\*)?"  
encodes the duration of a feature as a timestamp for its endpoint rather than as a relative durational value.

- **dur.ges**, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **endho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined end point.
- **endid**, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- **endto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- **endvo**, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined end point.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **join**, optional, xs:IDREFS  
used for linking visually separate slurs, sometimes necessary due to system breaks, that form a single musical phrase. Also used to indicate a measure which metrically completes the current one. Record the IDs of the separately encoded components, excluding this one.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **rend**, optional, xs:token, medium, wide, dashed, dotted  
records the appearance of the curve.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- **startvo**, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined start point.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.

- `to`, optional, `xs:decimal`  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- `tstamp`, optional, `xs:decimal`, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- `tstamp.ges`, optional, `xs:nonNegativeInteger`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `vo`, optional, `xs:decimal`  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- `x`, optional, `xs:decimal`  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `facsimile` attribute.
- `x2`, optional, `xs:decimal`  
encodes the optional 2nd x coordinate.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `y`, optional, `xs:decimal`  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `facsimile` attribute.
- `y2`, optional, `xs:decimal`  
encodes the optional 2nd y coordinate.

## Module:

shared

## Illustration:



## <physdesc> physical description

### Description:

Container for information about the location, appearance, construction, or handling of physical materials, such as their dimension, quantity, color, style, and technique of creation. Dedicatory text and title page features may also be encoded here when they are not transcribed as part of the front or back matter; i.e., when they are considered to be meta-data rather than a transcription. This element is modelled on an element in Encoded Archival Description (EAD).

**May contain:**

[condition](#), [dimensions](#), [exhibithist](#), [extent](#), [handlist](#), [inscription](#), [physloc](#), [physmedium](#), [provenance](#), [repository](#), [titlepage](#), [treatmenthist](#), [treatmentsched](#)

**May occur within:**

[source](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

header

**<physloc> *physical location*****Description:**

Location of the source within a repository, e.g., shelf mark or other locational information. This element is modelled on an element in Encoded Archival Description (EAD).

**May contain:**

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

**May occur within:**

[physdesc](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

**<physmedium> *physical medium***

## Description:

Records the physical materials used in the source, such as ink and paper. All materials may be described in a single <physmedium> element or multiple elements may be used, one for each medium. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[physdesc](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- authority, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

## **<port> port**

### **Description:**

MIDI port. The num attribute must be in the range 0-127.

### **May contain:**

EMPTY

### **May occur within:**

[midi](#)

### **Attributes:**

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, required, xs:nonNegativeInteger, 0 - 127  
records a MIDI number.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

midi

## **<price> price**

### **Description:**

The cost of access to a bibliographic item.



**May contain:**

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

**May occur within:**

[availability](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- unit, optional, xs:NMTOKEN  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

header

**<profiledesc> profile description****Description:**

A detailed description of the non-bibliographic aspects of the creation of a musical work, specifically the languages and sublanguages used, the situation in which it was produced, e.g. the participants, setting, reception history, etc. Do not confuse this with <filedesc>, which bundles bibliographic information about the creation of the MEI file. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[classification](#), [creation](#), [eventlist](#), [language](#)

**May occur within:**

[meihead](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields

are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

## **<prog> program**

## Description:

MIDI program change. The num attribute must be in the range 0-127.

## May contain:

EMPTY

## May occur within:

[midi](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, required, xs:nonNegativeInteger, 0 - 127  
records a MIDI number.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

midi

**<projectdesc> *project description***

## Description:

Project-level meta-data describing the aim or purpose for which the electronic file was encoded, funding agencies, etc. together with any other relevant information concerning the process by which it was assembled or collected. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[p](#)

## May occur within:

[encodingdesc](#)

## Attributes:

- `analog`, optional, `CDATA`  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

## <proport> proportion

### Description:

The <proportion> element is provided for the encoding of mensural notation. It allows the description of note durations as arithmetic ratios. While mensuration refers to the normal relationships between note durations, proportion affects the relations of the note durations to the tactus.

### May contain:

EMPTY

### May occur within:

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [staffdef](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

### Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, optional, xs:positiveInteger  
along with numbase, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- numbase, optional, xs:positiveInteger  
along with num, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

mensural

## **<provenance> *provenance***

### **Description:**

The record of ownership or custodianship of an item. This element is modelled on an element in the Encoded Archival Description (EAD) and Text Encoding Initiative (TEI).

### **May contain:**

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [eventlist](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

### **May occur within:**

[physdesc](#)

### **Attributes:**

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### **Module:**

header

## **<ptr> *pointer***

### **Description:**

An empty internal linking element that uses attributes to provide for movement from one place in an MEI document to another place in the same document. Unlike the <ref> element, <ptr> cannot contain text or sub-elements to describe the referenced object. Don't confuse this element with <extptr> which is used to connect the MEI document to an external electronic object. This element is modelled on an element in Encoded Archival Description (EAD).

### **May contain:**

EMPTY

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [application](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgdesc](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `plist`, optional, `xs:IDREFS`  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- `targettype`, optional, `xs:NMTOKEN`  
in contrast with the `role` attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- `xlink:actuate`, optional, `xs:token`, `onLoad`, `onRequest`, `other`, `none`  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the `show` attribute to determine link behavior.
- `xlink:role`, optional, `xs:anyURI`  
indicates a property of the entire link. The value of the `role` attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.
- `xlink:show`, optional, `xs:token`, `new`, `replace`, `other`, `none`  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- `xlink:title`, optional, `CDATA`  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

`pttrf`

**<pubstmt> publication statement**

## Description:

Container for information regarding the publication or distribution of a bibliographic item, including the publisher's name and address, the date of publication, and other relevant details. When an item is unpublished,

use only the <unpub> sub-element. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

[address](#), [availability](#), [date](#), [geogname](#), [identifier](#), [respstmt](#), [unpub](#)

### May occur within:

[filedesc](#), [source](#)

### Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

header

### <rdg> reading

### Description:

Since a reading can be a multi-measure section, the scoreddef element is allowed so that a reading may have its own meta-data without the overhead of child sections. The measure sub-element is declared in the meiBase DTD and the pb sub-element is declared in the meiShared DTD. The app sub-element is permitted in order to allow nested sub-variants. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [anchoredtext](#), [annot](#), [app](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [blockquote](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [curve](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [div](#), [dot](#), [dynam](#), [ending](#), [expan](#), [expansion](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [lg](#), [ligature](#), [line](#), [list](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [ossia](#), [p](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [sb](#), [scoredef](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [staffdef](#), [staffgrp](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [symbol](#), [table](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#), [verse](#)

### May occur within:

[app](#)

## Attributes:

- **cause**, optional, xs:NMTOKEN  
classifies the cause for the variant reading, according to any appropriate typology of possible origins.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **entityref**, optional, xs:ENTITY  
uses a previously-declared entity to identify an external electronic object.
- **hand**, optional, xs:IDREF  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **seq**, optional, xs:positiveInteger  
used to assign a sequence number related to the order in which the encoded features carrying this attribute are believed to have occurred.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **targettype**, optional, xs:NMTOKEN  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xlink:actuate**, optional, xs:token, onLoad, onRequest, other, none  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the show attribute to determine link behavior.
- **xlink:href**, optional, xs:anyURI  
allows the use of an previously-undeclared URI to identify an external electronic object.
- **xlink:role**, optional, xs:anyURI  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined



in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.

- `xlink:show`, optional, `xs:token`, new, replace, other, none  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- `xlink:title`, optional, CDATA  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

critapp

## <ref> reference

## Description:

An internal linking element that provides for movement from one place in a MEI document to another point in the same document. Unlike the `<ptr>` element, `<ref>` may contain text and sub-elements to describe the destination. Don't confuse this element with `<extref>` which provides for linking to an electronic object that is external to the MEI document. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [address](#), [annot](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgdesc](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `plist`, optional, `xs:IDREFS`  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.

- **targettype**, optional, **xs:NMTOKEN**  
in contrast with the **role** attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- **xlink:actuate**, optional, **xs:token**, **onLoad**, **onRequest**, **other**, **none**  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the **show** attribute to determine link behavior.
- **xlink:role**, optional, **xs:anyURI**  
indicates a property of the entire link. The value of the **role** attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.
- **xlink:show**, optional, **xs:token**, **new**, **replace**, **other**, **none**  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- **xlink:title**, optional, **CDATA**  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each **id** attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose **id** attribute is the same as the language tag's value.

## Module:

ptrref

## <reg> regularization

## Description:

Contains a reading which has been regularized or normalized in some sense. It is possible to identify the individual responsible for the regularization, and, using the **choice** and **orig** elements, to provide both original and regularized readings. The editor(s) responsible for asserting the regularized material may be recorded in the **resp** attribute. The value of **resp** must point to one or more identifiers declared in the document header. The **cert** attribute signifies the degree of certainty ascribed to the regularized reading. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#),

[ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

### May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [choice](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

### Attributes:

- **cert**, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- **evidence**, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

edittrans

### <reh> rehearsal mark

### Description:

In an orchestral score and its corresponding parts, a mark indicating a convenient point from which to resume rehearsal after a break. It may also be called a rehearsal figure, or when numbers are used instead of letters, a rehearsal number. See Read, p. 443. <reh> uses a subset of model.textphraseLike.limited.

### May contain:

PCDATA, [lb](#), [rend](#), [stack](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **fontfam**, optional, xs:token  
contains the name of a font-family.
- **fontname**, optional, xs:token  
records the name of the font.
- **fontsize**, optional, xs:decimal  
indicates the size of the font in printers' points, i.e., 1/72nd of an inch.
- **fontstyle**, optional, xs:token, ital, normal, oblique  
records the style of the font, i.e, italic, oblique, or normal.
- **fontweight**, optional, xs:token, bold  
used to indicate bold type.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **place**, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.

- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `vo`, optional, `xs:decimal`  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- `x`, optional, `xs:decimal`  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `y`, optional, `xs:decimal`  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `fac` attribute.

## Module:

cmn

## Illustration:



**<rend> rend**

## Description:

A formatting element indicating special visual rendering, e.g., bold or italicized, of a text word or phrase. When an entire element should be rendered in a special way, a style sheet function should be used instead of the `<rend>` element.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- **altrend**, optional, CDATA  
used to extend the values of the **rend** attribute. One or the other of the **rend** and **altrend** attributes is required.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **fontfam**, optional, xs:token  
contains the name of a font-family.
- **fontname**, optional, xs:token  
records the name of the font.
- **fontsize**, optional, xs:decimal  
indicates the size of the font in printers' points, i.e., 1/72nd of an inch.
- **fontstyle**, optional, xs:token, *ital*, *normal*, *oblique*  
records the style of the font, i.e, italic, oblique, or normal.
- **fontweight**, optional, xs:token, **bold**  
used to indicate bold type.
- **halign**, optional, xs:token, *left*, *right*, *center*, *justify*  
records horizontal alignment.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **rend**, optional, xs:token, *box*, *circle*, *dblunderline*, *none*, *quote*, *slash*, *smcaps*, *strike*, *sub*, *sup*, *underline*  
captures the appearance of the text. One or the other of the **rend** and **altrend** attributes is required.
- **rotation**, optional, xs:decimal  
A positive value for rotation rotates the text in a counter-clockwise fashion, while negative values produce clockwise rotation.
- **valign**, optional, xs:token, *top*, *middle*, *bottom*, *baseline*  
specifies the vertical alignment of the element content.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## **<repository> repository**

## Description:

Institution or agency which holds a bibliographic item. Sub-units of the institution may be marked with **<repository>** sub-elements. The name of the list from which a controlled value is taken may be recorded using the authority attribute. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physdesc](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- **analog**, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **authority**, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- **dbkey**, optional, xs:NMTOKEN  
used to record a value which serves as a primary key in an external database.
- **fac**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **nymref**, optional, xs:IDREF  
used to record a pointer to the regularized form of the name.
- **role**, optional, CDATA  
used to specify further information about the entity referenced by this name, for example, the occupation of a person or the status of a place.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

shared

## **<resp> responsibility**

### **Description:**

A phrase describing the nature of a person's intellectual responsibility. The name of the list from which a controlled value is taken may be recorded using the authority attribute. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

EMPTY

### **May occur within:**

[respstmt](#)

### **Attributes:**

- authority, optional, CDATA  
contains the name of the list from which an authorized value is taken.

### **Module:**

header

## **<respstmt> responsibility statement**

### **Description:**

Names one or more individuals, groups, or in rare cases, mechanical processes, responsible for creation or realization of the intellectual or artistic content. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[corpname](#), [name](#), [persname](#), [resp](#)

### **May occur within:**

[change](#), [editionstmt](#), [pubstmt](#), [seriesstmt](#), [titlestmt](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.



## Module:

header

**<rest> rest**

## Description:

A non-sounding event found in the source being transcribed (Read, p. 96-102). Do not confuse this element with the space element, which is used as an aid for visual alignment.

## May contain:

EMPTY

## May occur within:

[add](#), [beam](#), [bend](#), [corr](#), [damage](#), [del](#), [gliss](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

## Attributes:

- **altsym**, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- **beam**, optional, list of xs:token, "[i|m|t][1-6]", minimum length of 1  
indicates that this event is "under a beam".
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **dots**, optional, xs:nonNegativeInteger, 0 - 4  
records the number of augmentation dots required by a dotted duration.
- **dur**, optional, xs:token, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
records the duration of a feature using the relative durational values provided by the data.DURATION datatype.
- **dur.ges**, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **fermata**, optional, xs:token, above, below, within  
indicates the attachment of a fermata to this element. If visual information about the fermata needs to be recorded, then a <fermata> element should be employed instead.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.

- **instr**, optional, xs:IDREF  
provides a way of pointing to a MIDI instrument definition. It must contain the ID of an <instrdef> element elsewhere in the document.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **line**, optional, xs:positiveInteger  
indicates the line upon which a feature stands. The value must be in the range between 1 and the number of lines on the staff.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **num**, optional, xs:positiveInteger  
along with numbase, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- **numbase**, optional, xs:positiveInteger  
along with num, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **size**, optional, xs:token, normal, cue  
describes the relative size of a feature.
- **spaces**, optional, xs:positiveInteger  
states how many spaces are covered by the rest.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tuplet**, optional, list of xs:token, "[i|m|t][1-6]", minimum length of 1  
indicates that this feature participates in a tuplet.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `y`, optional, `xs:decimal`  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the `facs` attribute.

## Module:

shared

## <restore> restore

## Description:

Indicates restoration of musical material to an earlier state by cancellation of an editorial or authorial marking or instruction. The `desc` (description) attribute gives a prose description of the means of restoration, 'stet' or 'strike-down', for example. The `cert` attribute signifies the degree of certainty ascribed to the identification of the hand of the restoration. The `type` attribute may be used to indicate the action cancelled by the restoration. The `resp` attribute contains an ID reference to an element containing the name of the editor or transcriber responsible for identifying the hand of the restoration. The `hand` attribute signifies the hand of the agent which made the restoration. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

## May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

## Attributes:

- `desc`, optional, CDATA  
provides a description of the means of restoration.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `hand`, optional, `xs:IDREF`  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- seq, optional, xs:positiveInteger  
used to assign a sequence number related to the order in which the encoded features carrying this attribute are believed to have occurred.
- subtype, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- type, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

## **<revisiondesc> revision description**

## Description:

Container for information about alterations that have been made to an MEI file. It is recommended that changes be recorded in reverse chronological order, with the most recent alteration first. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[change](#)

## May occur within:

[meihead](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

## **<samplingdecl> *sampling declaration***

### **Description:**

Contains a prose description of the rationale and methods used in sampling texts in the creation of a corpus or collection. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[p](#)

### **May occur within:**

[encodingdesc](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### **Module:**

header

## **<sb> *system break***

### **Description:**

An empty formatting element that forces notation to begin on a new line. Do not confuse this element with the <lb> element, which performs a similar function in prose.

### **May contain:**

[custos](#)

### **May occur within:**

[ending](#), [layer](#), [lem](#), [measure](#), [ossia](#), [rdg](#), [score](#), [section](#), [staff](#), [syllable](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- rend, optional, xs:token, hash  
indicates whether hash marks should be rendered between systems. See Read, p. 436, ex. 26-3.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- source, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## <score> score

## Description:

Full score view of the mdiv. Since the measure element is optional, a score may consist entirely of pagebreaks, each of which points to a page image. Div elements are allowed preceding and following sections of music data in order to accommodate blocks of explanatory text.

## May contain:

[add](#), [anchoredtext](#), [annot](#), [app](#), [choice](#), [corr](#), [curve](#), [damage](#), [del](#), [div](#), [ending](#), [gap](#), [handshift](#), [line](#), [orig](#), [pb](#), [reg](#), [restore](#), [sb](#), [scoredef](#), [section](#), [sic](#), [staffdef](#), [staffgrp](#), [subst](#), [supplied](#), [symbol](#), [unclear](#)

## May occur within:

[mdiv](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.

- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## **<scoredef> score definition**

## Description:

Container for score meta-information.

## May contain:

[chordtable](#), [instrgrp](#), [keysig](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [staffgrp](#), [symboltable](#), [timeline](#)

## May occur within:

[ending](#), [layer](#), [lem](#), [measure](#), [ossia](#), [rdg](#), [score](#), [section](#), [staff](#), [syllable](#)

## Attributes:

- **barplace**, optional, xs:token, mensur, staff, takt  
records the location of a barline.
- **beam.group**, optional, CDATA  
provides an example of how automated beaming (including secondary beams) is to be performed. It can be used to set a default beaming pattern to be used when no beaming is indicated at the event level. beam.group must contain a comma-separated list of time values that add up to a measure, e.g., in 4/4 time '4,4,4,4' indicates each quarter note worth of shorter notes would be beamed together. Parentheses can be used to indicate sub-groupings of secondary beams. For example, '(4.,4.,4.)' in 9/8 meter indicates one outer beam per measure with secondary beams broken at each dotted quarter duration, while a measure of 16th notes in 4/4 with beam.group equal to '(4,4),(4,4)' will result in a primary beam covering all the notes and secondary beams each group of 4 notes. This beaming "directive" can be

overridden by using <beam> elements. If neither <beam> elements or the beam.group attribute is used, then no beaming is rendered. Beaming can be 'turned off' by setting beam.group to an empty string.

- beam.rend, optional, xs:token, acc, rit, norm  
encodes whether a beam is feathered and in which direction.
- beam.rests, optional, xs:token, true, false  
indicates whether automatically-drawn beams should include rests shorter than a quarter note duration.
- beam.slope, optional, xs:decimal  
captures default beam slope.
- clef.color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
describes the color of the clef.
- clef.dis, optional, xs:positiveInteger, "([\\-+]?[0-9]+) & (8|15|22)"  
records the amount of octave displacement to be applied to the clef.
- clef.dis.place, optional, xs:token, above, below  
records the direction of octave displacement to be applied to the clef.
- clef.line, optional, xs:positiveInteger  
contains a default value for the position of the clef.
- clef.shape, optional, xs:token, G, GG, F, C, perc, TAB  
encodes a value for the clef symbol.
- clef.visible, optional, xs:token, true, false  
determines whether the clef is to be displayed.
- dur.default, optional, xs:token, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
contains a default duration in those situations when the first note, rest, chord, etc. in a measure does not have a duration specified.
- dynam.dist, optional, xs:decimal  
records the distance from the staff for dynamic marks in 1/2 inter-line units.
- ending.rend, optional, xs:token, top, barred, grouped  
describes where ending marks should be displayed.
- grid.show, optional, xs:token, true, false  
determines whether to display guitar chord grids.
- harm.dist, optional, xs:decimal  
records the default distance from the staff of harmonic indications, such as guitar chord grids or functional labels.
- key.accid, optional, xs:token, s, f, ss, ff, n  
contains an accidental for the tonic key, if one is required, e.g., if key.pname equals 'c' and key.accid equals 's', then a tonic of C# is indicated.
- key.mode, optional, xs:token, major, minor, dorian, phrygian, lydian, mixolydian, aeolian, locrian  
indicates major, minor, or other tonality.
- key.pname, optional, xs:token, "[a-g]"  
holds the pitch name of the tonic key, e.g. 'c' for the key of C.
- key.sig, optional, xs:token, "mixed|0|[1-7][f|s]"  
indicates where the key lies in the circle of fifths.
- key.sig.mixed, optional, list of xs:NMTOKEN, minimum length of 1  
Mixed key signatures, e.g. those consisting of a mixture of flats and sharps (Read, p. 143, ex. 9-39), and key signatures with unorthodox placement of the accidentals (Read, p. 141) must be indicated by setting the key.sig attribute to 'mixed' and providing explicit keysig info in the key.sig.mixed attribute or in the <keysig> element. It is intended that key.sig.mixed contain a series of tokens with each token containing pitch name, accidental, and octave, such as 'As4 Cs5 Ef5' that indicate what key accidentals should be rendered and where they should be placed.



- `key.sig.show`, optional, `xs:token`, true, false  
indicates whether the key signature should be displayed.
- `key.sig.showchange`, optional, `xs:token`, true, false  
determines whether cautionary accidentals should be displayed at a key change.
- `lyric.align`, optional, `xs:decimal`  
describes the alignment of lyric syllables associated with a note or chord.
- `lyric.fam`, optional, `xs:token`  
sets the font family default value for lyrics.
- `lyric.name`, optional, `xs:token`  
sets the font name default value for lyrics.
- `lyric.size`, optional, `xs:decimal`  
sets the default font size value for lyrics.
- `lyric.style`, optional, `xs:token`, `ital`, `normal`, `oblique`  
sets the default font style value for lyrics.
- `lyric.weight`, optional, `xs:token`, `bold`  
sets the default font weight value for lyrics.
- `mensur.dot`, optional, `xs:token`, true, false  
determines if a dot is to be added to the base symbol.
- `mensur.form`, optional, `xs:token`, `horizontal`, `vertical`  
indicates whether the base symbol is written vertically or horizontally.
- `mensur.loc`, optional, `xs:positiveInteger`  
holds the staff location of the mensuration sign.
- `mensur.orient`, optional, `xs:token`, `"reversed|90CW|90CCW"`  
describes the rotation or reflection of the base symbol.
- `mensur.sign`, optional, `xs:token`, `C`, `O`  
the base symbol in the mensuration sign/time signature of mensural notation.
- `mensur.size`, optional, `xs:token`, `normal`, `cue`  
describes the relative size of the mensuration sign.
- `mensur.slash`, optional, `xs:positiveInteger`  
indicates the number lines added to the mensuration sign. For example, one slash is added for what we now call 'alla breve'.
- `meter.count`, optional, `xs:decimal`  
captures the number of beats in a measure, that is, the top number of the meter signature.
- `meter.rend`, optional, `xs:token`, `denomsym`, `norm`, `invis`  
contains indication of how the meter signature should be rendered.
- `meter.showchange`, optional, `xs:token`, true, false  
determines whether a new meter signature should be displayed when the meter signature changes.
- `meter.sym`, optional, `xs:token`, `common`, `cut`  
indicates the use of a meter symbol instead of a numeric meter signature, that is, 'C' for common time or 'C' with a slash for cut time.
- `meter.unit`, optional, `xs:decimal`  
contains the number indicating the beat unit, that is, the bottom number of the meter signature.
- `midi.channel`, optional, `xs:positiveInteger`, 0 - 16  
records a MIDI channel value.
- `midi.duty`, optional, `xs:token`, `"[0-9]+(\.[0-9]*)?%"`  
specifies the 'on' part of the duty cycle as a percentage of a note's duration.
- `midi.port`, optional, `xs:nonNegativeInteger`, 0 - 127  
sets the default MIDI port value.
- `midi.tempo`, optional, `xs:positiveInteger`, 10 - 1000  
contains a MIDI value, that is, the number of quarter notes per minute in the range from 10 to 1000.

- `midi.track`, optional, `xs:positiveInteger`  
sets the default MIDI track.
- `mm`, optional, `xs:positiveInteger`  
used to describe tempo in terms of beats (meter signature denominator) per minute, ala M.M. (Maezel's Metronome).
- `mnum.visible`, optional, `xs:token`, true, false  
indicates whether measure numbers should be displayed.
- `modusmaior`, optional, `xs:positiveInteger`, 2 - 3  
describes the maxima-long relationship.
- `modusminor`, optional, `xs:positiveInteger`, 2 - 3  
describes the long-breve relationship.
- `multi.number`, optional, `xs:token`, true, false  
indicates whether programmatically calculated counts of multiple measures of rest (`mrest`) and whole measure repeats (`mrpt`) in parts should be rendered.
- `music.name`, optional, `xs:token`  
sets the default music font name.
- `music.size`, optional, `xs:decimal`  
sets the default music font size.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `num`, optional, `xs:positiveInteger`  
along with `numbase`, describes duration as a ratio. `num` is the first value in the ratio, while `numbase` is the second.
- `numbase`, optional, `xs:positiveInteger`  
along with `num`, describes duration as a ratio. `num` is the first value in the ratio, while `numbase` is the second.
- `octave.default`, optional, `xs:nonNegativeInteger`, 0 - 9  
contains a default octave specification for use when the first note, rest, chord, etc. in a measure does not have an octave value specified.
- `ontheline`, optional, `xs:token`, true, false  
determines the placement of notes on a 1-line staff. A value of 'yes' places all notes on the line, while a value of 'no' places stems-up notes above the line and stems-down notes below the line.
- `optimize`, optional, `xs:token`, true, false  
display only those staves with notes?
- `page.botmar`, optional, `xs:decimal`  
indicates the amount of whitespace at the bottom of a rendered score page.
- `page.height`, optional, `xs:decimal`  
describes the physical height of the rendered output page.
- `page.leftmar`, optional, `xs:decimal`  
indicates the amount of whitespace at the left side of a rendered score page.
- `page.panels`, optional, `xs:positiveInteger`, 1 - 2  
indicates the number of logical pages to be rendered on a single physical page.
- `page.rightmar`, optional, `xs:decimal`  
indicates the amount of whitespace at the right side of a rendered score page.
- `page.scale`, optional, `mei:data.PERCENT`, `mei:data.RATIO``xs:token`, "[0-9]+(\.[0-9]\*)?%", `xs:token`, "[0-9]+(\.[0-9]\*)?:[0-9]+(\.[0-9]\*)?"  
indicates how the page should be scaled when rendered.
- `page.topmar`, optional, `xs:decimal`  
indicates the amount of whitespace at the top of a rendered score page.

- `page.units`, optional, `xs:token`, in, cm, mm  
contains the real-world measurement units (inches, centimeters, millimeters) used to describe the rendered page height, width, and margins.
- `page.width`, optional, `xs:decimal`  
describes the physical width of the rendered output page.
- `pedal.style`, optional, `xs:token`, line, pedstar, altpedstar  
determines whether piano pedal marks should be drawn as lines or as terms (e.g. 'Ped.' for pedal down and '\*' for pedal up).
- `ppq`, optional, `xs:positiveInteger`  
indicates the number of pulses (sometimes referred to as ticks or divisions) per quarter note. Unlike MIDI, MEI permits different values for a score and individual staves.
- `prolatio`, optional, `xs:positiveInteger`, 2 - 3  
describes the semibreve-minim relationship.
- `reh.enclose`, optional, `xs:token`, box, circle, none  
describes the enclosing shape for rehearsal marks.
- `slur.rend`, optional, `xs:token`, medium, wide, dashed, dotted  
describes the appearance of slurs.
- `spacing.packexp`, optional, `xs:decimal`  
describes a note's spacing relative to its time value.
- `spacing.packfact`, optional, `xs:decimal`  
describes the note spacing of output.
- `spacing.staff`, optional, `xs:decimal`  
sets the minimum amount of space between staves in the same system.
- `spacing.system`, optional, CDATA  
contains a space-separated pair of numbers describing the minimum and maximum amount of space between systems.
- `system.leftmar`, optional, `xs:decimal`  
describes the amount of whitespace at the left system margin relative to `page.leftmar`
- `system.rightmar`, optional, `xs:decimal`  
describes the amount of whitespace at the right system margin relative to `page.rightmar`
- `system.topmar`, optional, `xs:decimal`  
describes the distance from page's top edge to the first system; used for first page only
- `taktplace`, optional, `xs:nonNegativeInteger`  
If takt barlines are to be used, then the `taktplace` attribute may be used to denote the staff location of the shortened barline. The location may include staff lines, spaces, and the spaces directly above and below the staff. The value ranges between 0 (just below the staff) to 2 \* number of staff lines (directly above the staff). For example, on a 5-line staff the lines would be numbered 1,3,5,7, and 9 while the spaces would be numbered 0,2,4,6,8,10. For example, a value of '9' puts the barline through the top line of a 5-line staff.
- `tempus`, optional, `xs:positiveInteger`, 2 - 3  
describes the breve-semibreve relationship.
- `text.dist`, optional, `xs:decimal`  
determines how far from the staff to render text elements.
- `text.fam`, optional, `xs:token`  
provides a default value for the font family name of text (other than lyrics) when this information is not provided on the individual elements.
- `text.name`, optional, `xs:token`  
provides a default value for the font name of text (other than lyrics) when this information is not provided on the individual elements.

- `text.size`, optional, `xs:decimal`  
provides a default value for the font size of text (other than lyrics) when this information is not provided on the individual elements.
- `text.style`, optional, `xs:token`, `ital`, `normal`, `oblique`  
provides a default value for the font style of text (other than lyrics) when this information is not provided on the individual elements.
- `text.weight`, optional, `xs:token`, `bold`  
provides a default value for the font weight for text (other than lyrics) when this information is not provided on the individual elements.
- `tie.rend`, optional, `xs:token`, `medium`, `wide`, `dashed`, `dotted`  
describes the appearance of ties.
- `trans.diat`, optional, `xs:decimal`  
records the amount of diatonic pitch shift, e.g. C to C# = 0, C to Db = 1. Transposition requires both `trans.diat` and `trans.semi` attributes in order to distinguish the difference, for example, between a transposition from C to C# and one from C to Db.
- `trans.semi`, optional, `xs:decimal`  
contains the amount of pitch shift in semitones, C to C# = 1, C to Db = 1. Transposition requires both `trans.diat` and `trans.semi` attributes in order to distinguish the difference, for example, between a transposition from C to C# and one from C to Db.
- `tune.Hz`, optional, `xs:decimal`  
holds a value for cycles per second, i.e., Hertz, for a tuning reference pitch.
- `tune.pname`, optional, `xs:token`, "[a-g]"  
holds the pitch name of a tuning reference pitch.
- `tune.temper`, optional, `xs:token`, `equal`, `just`, `mean`, `pythagorean`  
provides a label for the tuning system, 'just', for example.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## <section> section

## Description:

Container for actual music data. The linking attributes are available here so that this element can point to external media objects or to related internal elements, such as annotations.

## May contain:

[add](#), [anchoredtext](#), [annot](#), [app](#), [choice](#), [corr](#), [curve](#), [damage](#), [del](#), [div](#), [ending](#), [expansion](#), [gap](#), [handshift](#), [line](#), [measure](#), [orig](#), [pb](#), [reg](#), [restore](#), [sb](#), [scoredef](#), [section](#), [sic](#), [staff](#), [staffdef](#), [staffgrp](#), [subst](#), [supplied](#), [symbol](#), [unclear](#)

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [ending](#), [lem](#), [orig](#), [part](#), [rdg](#), [reg](#), [restore](#), [score](#), [section](#), [sic](#), [supplied](#), [unclear](#)

## Attributes:

- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.

- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `entityref`, optional, `xs:ENTITY`  
uses a previously-declared entity to identify an external electronic object.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `next`, optional, `xs:IDREFS`  
used to point to the next event(s) in a user-defined collection.
- `plist`, optional, `xs:IDREFS`  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- `prev`, optional, `xs:IDREFS`  
points to the previous event(s) in a user-defined collection.
- `restart`, optional, `xs:token`, `true`, `false`  
indicates that staves begin again with this section.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `subtype`, optional, `xs:NMTOKEN`  
provide any sub-classification for the element, additional to that given by its type attribute.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `targettype`, optional, `xs:NMTOKEN`  
in contrast with the role attribute, allows the target resource to be characterized using any convenient classification scheme or typology.
- `type`, optional, `xs:NMTOKEN`  
characterizes the element in some sense, using any convenient classification scheme or typology.
- `xlink:actuate`, optional, `xs:token`, `onLoad`, `onRequest`, `other`, `none`  
defines whether a link occurs automatically or must be requested by the user. It is used in conjunction with the `show` attribute to determine link behavior.
- `xlink:href`, optional, `xs:anyURI`  
allows the use of an previously-undeclared URI to identify an external electronic object.
- `xlink:role`, optional, `xs:anyURI`  
indicates a property of the entire link. The value of the role attribute must be a URI reference as defined in [IETF RFC 2396], except that if the URI scheme used is allowed to have absolute and relative forms, the URI portion must be absolute. The URI reference identifies some resource that describes the intended property. When no value is supplied, no particular role value is to be inferred.
- `xlink:show`, optional, `xs:token`, `new`, `replace`, `other`, `none`  
defines whether a remote resource that is the target of a link appears at the point of the link, replaces the existing link, or appears in a new window.
- `xlink:title`, optional, `CDATA`  
contains a human-readable description of the entire link. A value is optional; if a value is supplied, it should contain a string that describes the resource. The use of this information is highly dependent on the type of processing being done. It may be used, for example, to make titles available to applications used by visually impaired users, or to create a table of links, or to present help text that appears when a user lets a mouse pointer hover over a starting resource.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

**Module:**

shared

**<segmentation> *segmentation***

**Description:**

Describes the principles according to which the musical text has been segmented, for example into movements, sections, etc. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[p](#)

**May occur within:**

[editorialdecl](#)

**Attributes:**

- `analog`, optional, `CDATA`  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

header

**<seqnum> *sequence number***

**Description:**

MIDI sequence number. The num attribute must be in the range 0-65535.

## May contain:

EMPTY

## May occur within:

[midi](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, required, xs:nonNegativeInteger, 0 - 65535  
holds the MIDI sequence number. The value must be in the range 0-65535.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

midi

## **<seriesstmt> series statement**

## Description:

Groups information about the series, if any, to which a publication belongs. In this context, the title element records the series title, the respStmt element records the person or group responsible for the series, and the identifier element contains a series identifier. The list element should be used when it is necessary to enumerate the contents of the series. The seriesstmt is provided within seriesstmt for the description of a sub-series. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[identifier](#), [list](#), [respstmt](#), [seriesstmt](#), [title](#)

## May occur within:

[filedesc](#), [seriesstmt](#), [source](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

**<sic> sic**

## Description:

Contains apparently incorrect or inaccurate musical material. A correction for the apparent error may be given in an accompanying child or sibling corr element. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

## May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [choice](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)



## Attributes:

- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

## <slur> slur

## Description:

Historically, the term "slur" indicated two notes performed legato, while the term "phrase" was used for a "unified melodic idea". Nowadays, however, "slur" often has the same meaning as "phrase" (See Read, p. 265-266), since the visual rendition of the two concepts is the same. MEI provides two distinct elements so that those users wishing to maintain a distinction for historical reasons may do so. If the user does not want to maintain the distinction, then the more generic <slur> element should be employed. The starting point of the slur may be indicated by either a **tstamp**, **tstamp.ges**, **tstamp.real** or **startid** attribute, while the ending point may be recorded by either a **dur**, **dur.ges** or **endid** attribute. It is a semantic error not to specify one starting and one ending type of attribute. Either **place**, **bulge**, or **bezier** attributes may be used to record the curvature of the slur. The slur and tie elements may be used instead of the **slur.\*** and **tie.\*** attributes provided on chord and note elements when 1) they are required by software, or 2) multiple, alternative slurs are needed. Please note that the **dur** attribute is not a true duration, but rather a time stamp for the end point of the slur.

## May contain:

EMPTY

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

- **bezier**, optional, list of **xs:integer**, minimum length of 1  
records the placement of Bezier control points as a series of space-separated xy coordinates, eg. 19 45 - 32 118.
- **bulge**, optional, list of **xs:decimal**, minimum length of 1  
describes a curve as a set of distance values above or below an imaginary line connecting the endpoints of the curve. The bulge attribute must contain one or more decimal values expressed in inter-line units.
- **color**, optional, **xs:token**, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, **xs:IDREF**  
points to an element of which the current element is a copy.

- **corresp**, optional, **xs:IDREFS**  
used to point to other elements that correspond to this one in a generic fashion.
- **curvedir**, optional, **xs:token**, above, below  
describes a curve with a generic term indicating whether the curve bows upward or downward. Upward curves go above the items they cover, while downward curves go under them.
- **dur**, optional, **xs:token**, "[0-9]+m \*[\+ \*]?[0-9]+(\.[0-9]\*)?"  
encodes the duration of a feature as a timestamp for its endpoint rather than as a relative durational value.
- **dur.ges**, optional, **CDATA**  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- **endho**, optional, **xs:decimal**  
records the horizontal adjustment of a feature's programmatically-determined end point.
- **endid**, optional, **xs:IDREF**  
indicates the final element in a sequence of events to which the feature applies.
- **endto**, optional, **xs:decimal**  
records a timestamp adjustment of a feature's programmatically-determined end point.
- **endvo**, optional, **xs:decimal**  
records a vertical adjustment of a feature's programmatically-determined end point.
- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **ho**, optional, **xs:decimal**  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **join**, optional, **xs:IDREFS**  
used for linking visually separate slurs, sometimes necessary due to system breaks, that form a single musical phrase. Also used to indicate a measure which metrically completes the current one. Record the IDs of the separately encoded components, excluding this one.
- **layer**, optional, list of **xs:positiveInteger**, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, **xs:IDREFS**  
used to point to the next event(s) in a user-defined collection.
- **plist**, optional, **xs:IDREFS**  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, **xs:IDREFS**  
points to the previous event(s) in a user-defined collection.
- **rend**, optional, **xs:token**, medium, wide, dashed, dotted  
records the appearance of the curve.
- **sameas**, optional, **xs:IDREFS**  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of **xs:positiveInteger**, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startho**, optional, **xs:decimal**  
records the horizontal adjustment of a feature's programmatically-determined start point.

- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- **startvo**, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined start point.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac**s attribute.
- **x2**, optional, xs:decimal  
encodes the optional 2nd x coordinate.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac**s attribute.
- **y2**, optional, xs:decimal  
encodes the optional 2nd y coordinate.

## Module:

cmn

## Illustration:



## **<source> source**

### **Description:**

A bibliographic description of a source for the electronic file. Multiple physdesc sub-elements may be used to describe the physically separate parts of a single source. The data attribute may be used to reference one or more features that occur in this particular source. This element is modelled on the sourcedesc element in the Text Encoding Initiative (TEI).

### **May contain:**

[classification](#), [editionstmt](#), [identifier](#), [language](#), [notesstmt](#), [physdesc](#), [pubstmt](#), [seriesstmt](#), [titlestmt](#)

### **May occur within:**

[sourcedesc](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- data, optional, xs:IDREFS  
used to link metadata elements to one or more data-containing elements.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

header

## **<sourcedesc> source description**

### **Description:**

A container for the descriptions of the source(s) used in the creation of the electronic file. This element is recommended where the MEI file is a transcription of existing music, but is not required when the data is originally created in MEI form.

### **May contain:**

[source](#)

### **May occur within:**

[filedesc](#)

**Attributes:**

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

header

**<space> space****Description:**

A placeholder used to fill an incomplete measure, layer, etc. most often so that the combined duration of the events equals the number of beats in the measure.

**May contain:**

EMPTY

**May occur within:**

[add](#), [beam](#), [corr](#), [damage](#), [del](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#), [verse](#)

**Attributes:**

- `beam`, optional, list of `xs:token`, "[i|m|t][1-6]", minimum length of 1  
indicates that this event is "under a beam".
- `compressable`, optional, `xs:token`, true, false  
indicates whether a space is 'compressable', i.e., if it may be removed at the discretion of processing software.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `dots`, optional, `xs:nonNegativeInteger`, 0 - 4  
records the number of augmentation dots required by a dotted duration.
- `dur`, optional, `xs:token`, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
records the duration of a feature using the relative durational values provided by the data.DURATION datatype.
- `dur.ges`, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.

- **fermata**, optional, xs:token, above, below, within  
indicates the attachment of a fermata to this element. If visual information about the fermata needs to be recorded, then a <fermata> element should be employed instead.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tuplet**, optional, list of xs:token, "[i|m|t][1-6]", minimum length of 1  
indicates that this feature participates in a tuplet.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## <stack> stacked text

## Description:

An inline table with a single column.

## May contain:

PCDATA, [abbr](#), [address](#), [annot](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#),

[hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

### Attributes:

- `align`, optional, `xs:token`, left, right, center, rightdigit  
specifies how the stacked text should be aligned.
- `delim`, optional, `CDATA`  
gives the delimiter used to mark the portions of text that are to be stacked.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### Module:

shared

**<staff> staff**

### Description:

A group of equidistant horizontal lines on which notes are placed in order to represent pitch. In MEI, however, `<staff>` is a grouping element for individual 'strands' of notes, rests, etc. that may or may not be rendered on staff lines; that is, diastematic and nondiastematic signs. The `n` attribute functions as a connection back to the appropriate `staffdef` element where logical and visual information about the staff is recorded. If the `n` attribute is omitted, encoding order is presumed to match the staff order. Of course, if data is supplied for only a subset of staves found in a printed source, the `n` attribute must be supplied.

### May contain:

[add](#), [anchoredtext](#), [annot](#), [app](#), [choice](#), [corr](#), [curve](#), [damage](#), [del](#), [div](#), [gap](#), [handshift](#), [layer](#), [line](#), [orig](#), [pb](#), [reg](#), [restore](#), [sb](#), [scoredef](#), [sic](#), [staffdef](#), [staffgrp](#), [subst](#), [supplied](#), [symbol](#), [unclear](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [ending](#), [lem](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [section](#), [sic](#), [supplied](#), [unclear](#)

### Attributes:

- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.

- **corresp**, optional, **xs:IDREFS**  
used to point to other elements that correspond to this one in a generic fashion.
- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, **xs:IDREFS**  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, **xs:IDREFS**  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, **xs:IDREFS**  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **synch**, optional, **xs:IDREFS**  
points to elements that are synchronous with the current element.
- **visible**, optional, **xs:token**, true, false  
indicates if a feature should be rendered when the notation is presented graphically or sounded.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## **<staffdef> staff definition**

## Description:

Container for staff meta-information.

## May contain:

[clef](#), [instrdef](#), [keysig](#), [label](#), [layerdef](#), [mensur](#), [proport](#)

## May occur within:

[ending](#), [layer](#), [lem](#), [measure](#), [ossia](#), [rdg](#), [score](#), [section](#), [staff](#), [staffgrp](#), [syllable](#)

## Attributes:

- **beam.group**, optional, **CDATA**  
provides an example of how automated beaming (including secondary beams) is to be performed. It can be used to set a default beaming pattern to be used when no beaming is indicated at the event level. **beam.group** must contain a comma-separated list of time values that add up to a measure, e.g., in 4/4 time '4,4,4,4' indicates each quarter note worth of shorter notes would be beamed together. Parentheses can be used to indicate sub-groupings of secondary beams. For example, '(4.,4.,4.)' in 9/8 meter indicates one outer beam per measure with secondary beams broken at each dotted quarter duration, while a measure of 16th notes in 4/4 with **beam.group** equal to '(4,4),(4,4)' will result in a primary beam covering all the notes and secondary beams each group of 4 notes. This beaming "directive" can be overridden by using **<beam>** elements. If neither **<beam>** elements or the **beam.group** attribute is used, then no beaming is rendered. Beaming can be 'turned off' by setting **beam.group** to an empty string.



- `beam.rend`, optional, `xs:token`, `acc`, `rit`, `norm`  
encodes whether a beam is feathered and in which direction.
- `beam.rests`, optional, `xs:token`, `true`, `false`  
indicates whether automatically-drawn beams should include rests shorter than a quarter note duration.
- `beam.slope`, optional, `xs:decimal`  
captures default beam slope.
- `clef.color`, optional, `xs:token`, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
describes the color of the clef.
- `clef.dis`, optional, `xs:positiveInteger`, "([\\-+]?[0-9]+) & (8|15|22)"  
records the amount of octave displacement to be applied to the clef.
- `clef.dis.place`, optional, `xs:token`, `above`, `below`  
records the direction of octave displacement to be applied to the clef.
- `clef.line`, optional, `xs:positiveInteger`  
contains a default value for the position of the clef.
- `clef.shape`, optional, `xs:token`, `G`, `GG`, `F`, `C`, `perc`, `TAB`  
encodes a value for the clef symbol.
- `clef.visible`, optional, `xs:token`, `true`, `false`  
determines whether the clef is to be displayed.
- `dur.default`, optional, `xs:token`, `long`, `breve`, `1`, `2`, `4`, `8`, `16`, `32`, `64`, `128`, `256`, `512`, `1024`, `2048`, `maxima`, `longa`, `brevis`, `semibrevis`, `minima`, `semiminima`, `fusa`, `semifusa`  
contains a default duration in those situations when the first note, rest, chord, etc. in a measure does not have a duration specified.
- `dynam.dist`, optional, `xs:decimal`  
records the distance from the staff for dynamic marks in 1/2 inter-line units.
- `grid.show`, optional, `xs:token`, `true`, `false`  
determines whether to display guitar chord grids.
- `harm.dist`, optional, `xs:decimal`  
records the default distance from the staff of harmonic indications, such as guitar chord grids or functional labels.
- `instr`, optional, `xs:IDREF`  
provides a way of pointing to a MIDI instrument definition. It must contain the ID of an `<instrdef>` element elsewhere in the document.
- `key.accid`, optional, `xs:token`, `s`, `f`, `ss`, `ff`, `n`  
contains an accidental for the tonic key, if one is required, e.g., if `key.pname` equals 'c' and `key.accid` equals 's', then a tonic of C# is indicated.
- `key.mode`, optional, `xs:token`, `major`, `minor`, `dorian`, `phrygian`, `lydian`, `mixolydian`, `aeolian`, `locrian`  
indicates major, minor, or other tonality.
- `key.pname`, optional, `xs:token`, "[a-g]"  
holds the pitch name of the tonic key, e.g. 'c' for the key of C.
- `key.sig`, optional, `xs:token`, "mixed0|[1-7][f|s]"  
indicates where the key lies in the circle of fifths.
- `key.sig.mixed`, optional, list of `xs:NMTOKEN`, minimum length of 1  
Mixed key signatures, e.g. those consisting of a mixture of flats and sharps (Read, p. 143, ex. 9-39), and key signatures with unorthodox placement of the accidentals (Read, p. 141) must be indicated by setting the `key.sig` attribute to 'mixed' and providing explicit `keysig` info in the `key.sig.mixed` attribute or in the `<keysig>` element. It is intended that `key.sig.mixed` contain a series of tokens with each token containing pitch name, accidental, and octave, such as 'As4 Cs5 Ef5' that indicate what key accidentals should be rendered and where they should be placed.
- `key.sig.show`, optional, `xs:token`, `true`, `false`  
indicates whether the key signature should be displayed.

- `key.sig.showchange`, optional, `xs:token`, `true`, `false`  
determines whether cautionary accidentals should be displayed at a key change.
- `label.abbr`, optional, CDATA  
provides a label for a group of staves on pages after the first page.
- `label.full`, optional, CDATA  
provides a label for a group of staves on the first page; `label.abbr` is used thereafter.
- `layerscheme`, optional, `xs:token`, `1`, `2o`, `2f`, `3o`, `3f`  
indicates the number of layers and their stem directions.
- `lines`, optional, `xs:positiveInteger`  
indicates the number of stafflines.
- `lines.color`, optional, `xs:token`, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
encodes the colors of the staff lines. The value is structured; that is, it should have the same number of space-separated RGB values as the number of lines indicated by the `lines` attribute. A line can be made invisible by assigning it the same RGB value as the background, usually white.
- `lines.visible`, optional, `xs:token`, `true`, `false`  
records whether all stafflines are visible.
- `lyric.align`, optional, `xs:decimal`  
describes the alignment of lyric syllables associated with a note or chord.
- `lyric.fam`, optional, `xs:token`  
sets the font family default value for lyrics.
- `lyric.name`, optional, `xs:token`  
sets the font name default value for lyrics.
- `lyric.size`, optional, `xs:decimal`  
sets the default font size value for lyrics.
- `lyric.style`, optional, `xs:token`, `ital`, `normal`, `oblique`  
sets the default font style value for lyrics.
- `lyric.weight`, optional, `xs:token`, `bold`  
sets the default font weight value for lyrics.
- `mensur.dot`, optional, `xs:token`, `true`, `false`  
determines if a dot is to be added to the base symbol.
- `mensur.form`, optional, `xs:token`, `horizontal`, `vertical`  
indicates whether the base symbol is written vertically or horizontally.
- `mensur.loc`, optional, `xs:positiveInteger`  
holds the staff location of the mensuration sign.
- `mensur.orient`, optional, `xs:token`, `"reversed|90CW|90CCW"`  
describes the rotation or reflection of the base symbol.
- `mensur.sign`, optional, `xs:token`, `C`, `O`  
the base symbol in the mensuration sign/time signature of mensural notation.
- `mensur.size`, optional, `xs:token`, `normal`, `cue`  
describes the relative size of the mensuration sign.
- `mensur.slash`, optional, `xs:positiveInteger`  
indicates the number lines added to the mensuration sign. For example, one slash is added for what we now call 'alla breve'.
- `meter.count`, optional, `xs:decimal`  
captures the number of beats in a measure, that is, the top number of the meter signature.
- `meter.rend`, optional, `xs:token`, `denomsym`, `norm`, `invis`  
contains indication of how the meter signature should be rendered.
- `meter.showchange`, optional, `xs:token`, `true`, `false`  
determines whether a new meter signature should be displayed when the meter signature changes.

- `meter.sym`, optional, `xs:token`, common, cut  
indicates the use of a meter symbol instead of a numeric meter signature, that is, 'C' for common time or 'C' with a slash for cut time.
- `meter.unit`, optional, `xs:decimal`  
contains the number indicating the beat unit, that is, the bottom number of the meter signature.
- `modusmaior`, optional, `xs:positiveInteger`, 2 - 3  
describes the maxima-long relationship.
- `modusminor`, optional, `xs:positiveInteger`, 2 - 3  
describes the long-breve relationship.
- `multi.number`, optional, `xs:token`, true, false  
indicates whether programmatically calculated counts of multiple measures of rest (`mrest`) and whole measure repeats (`mrpt`) in parts should be rendered.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `num`, optional, `xs:positiveInteger`  
along with `numbase`, describes duration as a ratio. `num` is the first value in the ratio, while `numbase` is the second.
- `numbase`, optional, `xs:positiveInteger`  
along with `num`, describes duration as a ratio. `num` is the first value in the ratio, while `numbase` is the second.
- `octave.default`, optional, `xs:nonNegativeInteger`, 0 - 9  
contains a default octave specification for use when the first note, rest, chord, etc. in a measure does not have an octave value specified.
- `ontheline`, optional, `xs:token`, true, false  
determines the placement of notes on a 1-line staff. A value of 'yes' places all notes on the line, while a value of 'no' places stems-up notes above the line and stems-down notes below the line.
- `pedal.style`, optional, `xs:token`, line, pedstar, altpedstar  
determines whether piano pedal marks should be drawn as lines or as terms (e.g. 'Ped.' for pedal down and '\*' for pedal up).
- `ppq`, optional, `xs:positiveInteger`  
indicates the number of pulses (sometimes referred to as ticks or divisions) per quarter note. Unlike MIDI, MEI permits different values for a score and individual staves.
- `prolatio`, optional, `xs:positiveInteger`, 2 - 3  
describes the semibreve-minim relationship.
- `proport.num`, optional, `xs:positiveInteger`  
Together, `proport.num` and `proport.numbase` specify a proportional change as a ratio, e.g., 1:3. `Proport.num` is for the first value in the ratio.
- `proport.numbase`, optional, `xs:positiveInteger`  
Together, `proport.num` and `proport.numbase` specify a proportional change as a ratio, e.g., 1:3. `Proport.numbase` is for the second value in the ratio.
- `reh.enclose`, optional, `xs:token`, box, circle, none  
describes the enclosing shape for rehearsal marks.
- `scale`, optional, `xs:token`, "[0-9]+(\.[0-9]\*)?"  
indicates how the feature should be scaled when rendered.
- `slur.rend`, optional, `xs:token`, medium, wide, dashed, dotted  
describes the appearance of slurs.
- `spacing`, optional, `xs:decimal`  
records the absolute distance (as opposed to the relative distances recorded in `<scoredef>` elements) between this staff and the preceding one in the same system. This value is meaningless for the first staff in a system since the `spacing.system` attribute indicates the spacing between systems.

- `tab.strings`, optional, list of `xs:NMTOKEN`, minimum length of 1  
provides a written pitch and octave for each open string, e.g. "e3 a3 d4 g4 b4 e5" for standard guitar tuning. It should contain the number of tokens indicated by the `lines` attribute. Chromatic alteration may be indicated with '-', or 'f', (flat) and '#', or 's' (sharp). Double sharps and flats are not permitted.
- `tempus`, optional, `xs:positiveInteger`, 2 - 3  
describes the breve-semibreve relationship.
- `text.dist`, optional, `xs:decimal`  
determines how far from the staff to render text elements.
- `text.fam`, optional, `xs:token`  
provides a default value for the font family name of text (other than lyrics) when this information is not provided on the individual elements.
- `text.name`, optional, `xs:token`  
provides a default value for the font name of text (other than lyrics) when this information is not provided on the individual elements.
- `text.size`, optional, `xs:decimal`  
provides a default value for the font size of text (other than lyrics) when this information is not provided on the individual elements.
- `text.style`, optional, `xs:token`, `ital`, `normal`, `oblique`  
provides a default value for the font style of text (other than lyrics) when this information is not provided on the individual elements.
- `text.weight`, optional, `xs:token`, `bold`  
provides a default value for the font weight for text (other than lyrics) when this information is not provided on the individual elements.
- `tie.rend`, optional, `xs:token`, `medium`, `wide`, `dashed`, `dotted`  
describes the appearance of ties.
- `trans.diat`, optional, `xs:decimal`  
records the amount of diatonic pitch shift, e.g. C to C# = 0, C to Db = 1. Transposition requires both `trans.diat` and `trans.semi` attributes in order to distinguish the difference, for example, between a transposition from C to C# and one from C to Db.
- `trans.semi`, optional, `xs:decimal`  
contains the amount of pitch shift in semitones, C to C# = 1, C to Db = 1. Transposition requires both `trans.diat` and `trans.semi` attributes in order to distinguish the difference, for example, between a transposition from C to C# and one from C to Db.
- `visible`, optional, `xs:token`, `true`, `false`  
indicates if a feature should be rendered when the notation is presented graphically or sounded.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

shared

## **<staffgrp> staff group**

## Description:

A group of bracketed or braced staves. Bracketed staff groups may contain other bracketed or braced staff groups or single staves. See Read, p. 35-38, examples p. 434, 438. System is the more proper name for this concept (Read, p. 37-38).

**May contain:**

[grpsym](#), [instrdef](#), [label](#), [staffdef](#), [staffgrp](#)

**May occur within:**

[ending](#), [layer](#), [lem](#), [measure](#), [ossia](#), [rdg](#), [score](#), [scoredef](#), [section](#), [staff](#), [staffgrp](#), [syllable](#)

**Attributes:**

- **barthru**, optional, xs:token, true, false  
indicates whether barlines go across the space between staves (true) or are only drawn across the lines of each staff (false).
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **instr**, optional, xs:IDREF  
provides a way of pointing to a MIDI instrument definition. It must contain the ID of an <instrdef> element elsewhere in the document.
- **label.abbr**, optional, CDATA  
provides a label for a group of staves on pages after the first page.
- **label.full**, optional, CDATA  
provides a label for a group of staves on the first page; label.abbr is used thereafter.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **symbol**, optional, xs:token, brace, bracket, line, none  
specifies the symbol used to group a set of staves.
- **visible**, optional, xs:token, true, false  
indicates if a feature should be rendered when the notation is presented graphically or sounded.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

shared

**<stdvals> standard values****Description:**

Specifies the format used when standardized date or number values are supplied. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[p](#)

**May occur within:**

[editorialdecl](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

header

**<stylename> style name**

## Description:

A label for a characteristic style of writing or performance, such as 'bebop' or 'rock-n-roll'. Do not confuse this element with the <periodname> element. The name of the list from which a controlled value is taken may be recorded using the authority attribute.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields

are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.

- authority, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- cert, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- dbkey, optional, xs:NMTOKEN  
used to record a value which serves as a primary key in an external database.
- evidence, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- nymref, optional, xs:IDREF  
used to record a pointer to the regularized form of the name.
- resp, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- role, optional, CDATA  
used to specify further information about the entity referenced by this name, for example, the occupation of a person or the status of a place.
- source, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- subtype, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- type, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

## Module:

namesdates

## **<subst> substitution**

## Description:

Groups transcriptional elements when the combination is to be regarded as a single intervention in the text. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[add](#), [corr](#), [damage](#), [del](#), [orig](#), [reg](#), [restore](#), [sic](#), [supplied](#), [unclear](#)

## May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

## Attributes:

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

**<supplied> supplied**

## Description:

Contains musical material supplied by the transcriber or editor in place of text which cannot be read, either because of physical damage or loss in the original or because it is illegible for any reason. When the presumed loss of text arises from an identifiable cause, `agent` signifies the causative agent. When the presumed loss of text arises from action (partial deletion, etc.) assignable to an identifiable hand, the `hand` attribute signifies the hand responsible for the action. The `reason` attribute indicates why the text has to be supplied, e.g. 'overbinding', 'faded ink', 'lost folio', 'omitted in original', etc. The `source` attribute contains the source of the supplied text. The editor(s) responsible for supplied material may be recorded in the `resp` attribute. The value of `resp` must point to one or more identifiers declared in the document header. The `cert` attribute signifies the degree of certainty ascribed to the supplied material. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

## May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)



## Attributes:

- agent, optional, CDATA  
signifies the causative agent of damage, illegibility, or other loss of original text.
- cert, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- evidence, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- reason, optional, CDATA  
holds a short phrase describing the reason for missing textual material (gap), why material is supplied (supplied), or why transcription is difficult (unclear).
- resp, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- source, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

## <surface> surface

## Description:

Defines a written surface in terms of a rectangular coordinate space, optionally grouping one or more graphic representations of that space, and rectangular zones of interest within it. The startid attribute may be used to hold a reference to the first feature occurring on this surface. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[figdesc](#), [graphic](#), [zone](#)

## May occur within:

[facsimile](#)

## Attributes:

- lrx, optional, xs:nonNegativeInteger  
indicates the lower-right corner x coordinate.
- lry, optional, xs:nonNegativeInteger  
indicates the lower-left corner x coordinate.

- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `startid`, optional, `xs:IDREF`  
holds a reference to the first element in a sequence of events to which the feature applies.
- `ulx`, optional, `xs:nonNegativeInteger`  
indicates the upper-left corner x coordinate.
- `uly`, optional, `xs:nonNegativeInteger`  
indicates the upper-left corner y coordinate.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

facsimile

## <syl> syllable

## Description:

Individual lyric syllable. Do not confuse this element with the syllable element. The align attribute indicates the horizontal alignment of the syllable with respect to the note to which it is attached.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expansion](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[lem](#), [note](#), [rdg](#), [syllable](#), [verse](#)

## Attributes:

- `con`, optional, `xs:token`, `s`, `d`, `u`, `t`  
describes the symbols typically used to indicate breaks between syllables: `s` (`_s_space`) = word separator, `d` (`_d_ash`) = syllable separator, `u` (`_u_underscore`) = syllable extension, `t` (`_t_ilde`) = syllable elision
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `fontfam`, optional, `xs:token`  
contains the name of a font-family.
- `fontname`, optional, `xs:token`  
records the name of the font.
- `fontsize`, optional, `xs:decimal`  
indicates the size of the font in printers' points, i.e., 1/72nd of an inch.
- `fontstyle`, optional, `xs:token`, `ital`, `normal`, `oblique`  
records the style of the font, i.e, italic, oblique, or normal.

- **fontweight**, optional, xs:token, bold  
used to indicate bold type.
- **halign**, optional, xs:token, left, right, center, justify  
records horizontal alignment.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **wordpos**, optional, xs:token, i, m, t  
records the position of a syllable within a word.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac** attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac** attribute.

## Module:

shared

## <syllable> *syllable*

## Description:

Neume notation can be thought of as "neumed text". Therefore, the syllable element provides high-level organization in this repertoire.

## May contain:

[accid](#), [add](#), [anchoredtext](#), [annot](#), [app](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corr](#), [curve](#), [custos](#), [damage](#), [del](#), [dir](#), [div](#), [dot](#), [dynam](#), [fermata](#), [ftrem](#), [gap](#), [gliss](#), [hairpin](#),

[halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [ineume](#), [keysig](#), [ligature](#), [line](#), [lyrics](#), [mensur](#), [midi](#), [mordent](#), [note](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [phrase](#), [proport](#), [reg](#), [reh](#), [rest](#), [restore](#), [sb](#), [scoredef](#), [sic](#), [slur](#), [space](#), [staffdef](#), [staffgrp](#), [subst](#), [supplied](#), [syl](#), [symbol](#), [tempo](#), [tie](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#), [verse](#)

### May occur within:

[layer](#), [lem](#), [ligature](#), [rdg](#)

### Attributes:

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### Module:

neumes

## <symbol> symbol

### Description:

A reference to a previously defined symbol. The starting point, e.g. "hotspot", of the symbol may be identified in absolute output coordinate terms using the x and y attributes or relative to another element using the startid attribute. Attributes in the att.visualoffset class may be used to record horizontal, vertical, or time offsets from the absolute coordinates or from the location of the referenced element. The ref attribute must contain the id of a symboldef element. The scale attribute indicates that the printed output must be scaled by the specified percentage.

### May contain:

EMPTY

### May occur within:

[dir](#), [ending](#), [figdesc](#), [harm](#), [layer](#), [lem](#), [measure](#), [ossia](#), [pgdesc](#), [rdg](#), [score](#), [section](#), [staff](#), [syllable](#), [symboldef](#), [tempo](#)

### Attributes:

- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.

- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **ref**, required, xs:IDREF  
contains a reference to a previously-declared user-defined symbol.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **scale**, optional, xs:token, "[0-9]+(\.[0-9]\*)?%"  
indicates how the feature should be scaled when rendered.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.

## Module:

usersymbols

## <symboldef> symbol definition

## Description:

Declaration of an individual symbol in a symboltable.

**May contain:**

[anchoredtext](#), [curve](#), [line](#), [symbol](#)

**May occur within:**

[symboltable](#)

**Attributes:**

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

usersymbols

**<symboltable> *symbol table***

**Description:**

Contains individual, user-defined symbols. Like a chord table, a symboltable may be shared between mei instances through the use of an external parsed entity containing the symboltable to be shared.

**May contain:**

[symboldef](#)

**May occur within:**

[scoredef](#)

**Attributes:**

- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

usersymbols

**<sysreq> *system requirements***

**Description:**

System requirements for using the electronic item.

**May contain:**

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

**May occur within:**

[availability](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

header

**<table>** *table*

**Description:**

Visual layout in tabular form. This element is modelled on elements in Encoded Archival Description (EAD), Text Encoding Initiative (TEI), and HTML.

**May contain:**

[caption](#), [tr](#)

**May occur within:**

[annot](#), [blockquote](#), [creation](#), [div](#), [event](#), [figdesc](#), [fw](#), [item](#), [lem](#), [p](#), [pgdesc](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [td](#), [th](#), [titlepage](#)

**Attributes:**

- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.

- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **x**, optional, **xs:decimal**  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.
- **y**, optional, **xs:decimal**  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.

## Module:

figtable

## <td> *table data*

## Description:

Designates a table cell that contains data as opposed to a cell that contains column or row heading information. The **colspan** and **rowspan** attributes tabular display rendering information. This element is modelled on an element in HTML.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expansion](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [lg](#), [list](#), [name](#), [num](#), [orig](#), [p](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [style](#), [stylename](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

## May occur within:

[tr](#)

## Attributes:

- **colspan**, optional, **xs:positiveInteger**  
the number of columns spanned by this cell.
- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **rowspan**, optional, **xs:positiveInteger**  
the number of rows spanned by this cell.



- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

figtable

## <tempo> tempo

## Description:

Text and symbols descriptive of tempo, mood, or style, e.g., "allarg.", "a tempo", "cantabile", "Moderato", "[qtrnote]=60", "Moderato [qtrnote] =60"). Both instantaneous and continuous tempo markings may be encoded using this element. Please note that the dur attribute here is expressed in musical time, i.e., beats or other time stamp. Therefore, it is not a true duration, but rather a time stamp for the end point of the directive.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [anchoredtext](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [curve](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [line](#), [name](#), [num](#), [orig](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [symbol](#), [title](#), [unclear](#)

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#), [verse](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- endho, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined end point.
- endto, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.

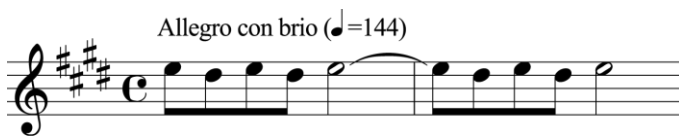
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **midi.tempo**, optional, xs:positiveInteger, 10 - 1000  
contains a MIDI value, that is, the number of quarter notes per minute in the range from 10 to 1000.
- **mm**, optional, xs:positiveInteger  
used to describe tempo in terms of beats (meter signature denominator) per minute, ala M.M. (Maezel's Metronome).
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **place**, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.

- **x**, optional, **xs:decimal**  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac**s attribute.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.
- **y**, optional, **xs:decimal**  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac**s attribute.

## Module:

shared

## Illustration:



## <term> term

## Description:

Single keyword or phrase which describes the work. The **classcode** attribute may be used to link the term to a terminological source given in a **classcode** element. The **term** element may include other **term** elements in order to allow the creation of coordinated terms; i.e., terms created from a combination of other, independent terms. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), **term**, [title](#)

## May occur within:

[keywords](#), [term](#)

## Attributes:

- **analog**, optional, **CDATA**  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields

are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.

- classcode, optional, xs:IDREF  
contains a reference to the controlled vocabulary from which the term is drawn. The value must match the value of an ID attribute on a classcode element given elsewhere in the document.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

header

## **<th> table header**

## Description:

Designates a table cell containing column or row heading information as opposed to one containing data. The colspan and rowspan attributes tabular display rendering information. This element is modelled on an element in HTML.

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [blockquote](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expa](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [lg](#), [list](#), [name](#), [num](#), [orig](#), [p](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [style](#), [sub](#), [subst](#), [supplied](#), [table](#), [title](#), [unclear](#)

## May occur within:

[tr](#)

## Attributes:

- colspan, optional, xs:positiveInteger  
the number of columns spanned by this cell.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- rowspan, optional, xs:positiveInteger  
the number of rows spanned by this cell.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags'

as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

figtable

## <tie> tie

## Description:

An indication that two notes of the same pitch form a single note with their combined rhythmic values. Most often it is rendered as a curved line connecting the two notes. See Read, p. 110-111, 122.

## May contain:

EMPTY

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

- bezier, optional, list of xs:integer, minimum length of 1  
records the placement of Bezier control points as a series of space-separated xy coordinates, eg. 19 45 - 32 118.
- bulge, optional, list of xs:decimal, minimum length of 1  
describes a curve as a set of distance values above or below an imaginary line connecting the endpoints of the curve. The bulge attribute must contain one or more decimal values expressed in inter-line units.
- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- curvedir, optional, xs:token, above, below  
describes a curve with a generic term indicating whether the curve bows upward or downward. Upward curves go above the items they cover, while downward curves go under them.
- endho, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined end point.
- endid, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- endto, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- endvo, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined end point.

- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **rend**, optional, xs:token, medium, wide, dashed, dotted  
records the appearance of the curve.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startho**, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **startto**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- **startvo**, optional, xs:decimal  
records a vertical adjustment of a feature's programmatically-determined start point.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.

- vo, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- x2, optional, xs:decimal  
encodes the optional 2nd x coordinate.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- y2, optional, xs:decimal  
encodes the optional 2nd y coordinate.

## Module:

cmn

## <timeline> timeline

## Description:

Provides a set of ordered points in time to which musical elements can be linked in order to create a temporal alignment of those elements. The origin attribute designates the origin of the timeline, i.e., the time at which it begins. It must point to one of the when elements in its content. Units specifies the unit of time corresponding to the value of the interval attribute of the timeline or of its constituent points in time. The mediacontent attribute is provided in order to link the timeline to a particular external media file, such as an audio file. The medialength attribute specifies the length of the external media file in terms of the unit attribute. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

[when](#)

## May occur within:

[scoredef](#)

## Attributes:

- mediacontent, optional, xs:anyURI  
holds the web-addressable location of the external digital media.
- medialength, optional, xs:positiveInteger  
indicates the length of the external digital file.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- origin, required, xs:IDREF  
designates the origin of the timeline, i.e. the time at which it begins.

- unit, optional, xs:NMTOKEN  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

linkalign

## <title> title

## Description:

Title of a bibliographic entity. The type attribute may be used to classify the title according to some convenient typology. Sample values include: main (main title), subordinate (subtitle, title of part), abbreviated (abbreviated form of title), alternative (alternate title by which the work is also known), translated (translated form of title), uniform (collective title). The type attribute is provided for convenience in analysing titles and processing them according to their type; where such specialized processing is not necessary, there is no need for such analysis, and the entire title, including subtitles and any parallel titles, may be enclosed within a single <title> element. Title parts may be encoded in <title> sub-elements. The name of the list from which a controlled value is taken may be recorded using the authority attribute. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

PCDATA, [abbr](#), [add](#), [address](#), [annot](#), [bibl](#), [choice](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [expan](#), [extptr](#), [extref](#), [fig](#), [gap](#), [geogname](#), [handshift](#), [identifier](#), [lb](#), [name](#), [num](#), [orig](#), [pb](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [sic](#), [stack](#), [stylename](#), [subst](#), [supplied](#), [title](#), [unclear](#)

## May occur within:

[abbr](#), [accessdesc](#), [acqsource](#), [add](#), [addressline](#), [altmeiid](#), [anchoredtext](#), [annot](#), [bibl](#), [caption](#), [condition](#), [corpname](#), [corr](#), [damage](#), [date](#), [del](#), [dimensions](#), [dir](#), [dynam](#), [edition](#), [event](#), [exhibithist](#), [expan](#), [extent](#), [extref](#), [fw](#), [geogname](#), [hand](#), [harm](#), [head](#), [identifier](#), [inscription](#), [item](#), [l](#), [label](#), [language](#), [lem](#), [line](#), [name](#), [num](#), [orig](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [physloc](#), [physmedium](#), [price](#), [provenance](#), [rdg](#), [ref](#), [reg](#), [rend](#), [repository](#), [restore](#), [seriesmt](#), [sic](#), [stack](#), [stylename](#), [supplied](#), [syl](#), [sysreq](#), [td](#), [tempo](#), [term](#), [th](#), [title](#), [titlestmt](#), [treatmenthist](#), [treatmentsched](#), [unclear](#), [userrestrict](#)

## Attributes:

- authority, optional, CDATA  
contains the name of the list from which an authorized value is taken.
- dbkey, optional, xs:NMTOKEN  
used to record a value which serves as a primary key in an external database.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- level, optional, xs:token, a, m, j, s, u  
indicates whether this is the title of an article, monograph, journal, series, or unpublished material.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.



- `nymref`, optional, `xs:IDREF`  
used to record a pointer to the regularized form of the name.
- `role`, optional, `CDATA`  
used to specify further information about the entity referenced by this name, for example, the occupation of a person or the status of a place.
- `subtype`, optional, `xs:NMTOKEN`  
provide any sub-classification for the element, additional to that given by its type attribute.
- `type`, optional, `xs:NMTOKEN`  
characterizes the element in some sense, using any convenient classification scheme or typology.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

### Module:

shared

**<titlepage>** *title page*

### Description:

Contains a transcription of the title page of a text. It may be used within the `physdesc` element when no other transcription is provided. This element is modelled on an element in Encoded Archival Description (EAD).

### May contain:

[blockquote](#), [lb](#), [lg](#), [list](#), [p](#), [pb](#), [table](#)

### May occur within:

[front](#), [physdesc](#)

### Attributes:

- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- `xml:lang`, optional, `xs:language`  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

**Module:**

shared

**<titlestmt> title statement****Description:**

Container for title and responsibility meta-data. This element is modelled on an element in the Text Encoding Initiative (TEI).

**May contain:**

[respstmt](#), [title](#)

**May occur within:**

[filedesc](#), [source](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

header

**<tr> table row****Description:**

A formatting element that contains one or more <td> or <th> elements (cells) in a <table>. A cell is the intersection of a row and a column. The precise rendition of the table and its cells should be specified in a style sheet. This element is modelled on an element in HTML.

**May contain:**

[td](#), [th](#)

**May occur within:**

[table](#)

**Attributes:**

- **facs**, optional, **xs:IDREFS**  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **x**, optional, **xs:decimal**  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.
- **xml:id**, optional, **xs:ID**  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **xml:lang**, optional, **xs:language**  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.
- **y**, optional, **xs:decimal**  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **facs** attribute.

**Module:**

figtable

**<reatmenthist> treatment history****Description:**

A record of the treatment the item has undergone (e.g., deacidification, restoration, etc.) Treatment history may also comprise details of the treatment process (e.g., chemical solutions used, techniques applied, etc.), the date the treatment was applied, etc. This element is modelled on an element in Encoded Archival Description (EAD).

**May contain:**

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

**May occur within:**

[physdesc](#)

**Attributes:**

- **analog**, optional, **CDATA**  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- **n**, optional, **xs:NMTOKEN**  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

header

## **<trementsched> *treatment scheduled***

## Description:

Scheduled treatment, e.g. deacidification, restoration, etc., for an item. This element is modelled on an element in Encoded Archival Description (EAD).

## May contain:

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

## May occur within:

[physdesc](#)

## Attributes:

- `analog`, optional, `CDATA`  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

header

## **<trill> *trill***

## Description:

Rapid alternation of a note with one (usually at the interval of a second) above. Usually, the interval is understood to be diatonic unless altered by an accidental. The starting note of the trill; i.e., the written one or the ornamenting one, and the speed of alternation depends on performance practice. Events may be contained within `<trill>` in order to record precise performance data. The starting point of the trill may be indicated by either a `tstamp`, `tstamp.ges`, `tstamp.real` or `startid` attribute, while the ending point may be recorded by either a

dur, dur.ges or endid attribute. It is a semantic error not to specify a starting point attribute. Please note that the dur attribute is not a true duration, but rather a time stamp for the end point of the trill.

### May contain:

[barline](#), [beam](#), [beatrpt](#), [bend](#), [btrem](#), [chord](#), [clefchange](#), [custos](#), [ftrem](#), [gliss](#), [halfmrpt](#), [keysig](#), [ligature](#), [mensur](#), [note](#), [pad](#), [proport](#), [rest](#), [space](#), [tuplet](#)

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- accidlower, optional, xs:token, s, f, ss, x, ff, xs, tb, n, nf, ns, su, sd, fu, fd, nu, nd  
records the written accidental associated with a lower neighboring note.
- accidupper, optional, xs:token, s, f, ss, x, ff, xs, tb, n, nf, ns, su, sd, fu, fd, nu, nd  
records the written accidental associated with an upper neighboring note.
- color, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- dur, optional, xs:token, "([0-9]+m \*|+ \*)?[0-9]+(\\.?[0-9]\*)?"  
encodes the duration of a feature as a timestamp for its endpoint rather than as a relative durational value.
- dur.ges, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- endho, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined end point.
- endid, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- endto, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined end point.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- ho, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- layer, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.

- place, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- plist, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- startho, optional, xs:decimal  
records the horizontal adjustment of a feature's programmatically-determined start point.
- startid, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- startto, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined start point.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- to, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- tstamp.ges, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- tstamp.real, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- vo, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

cmnOrnaments

## Illustration:



**<trkname> track name**

## Description:

MIDI track/sequence name.

## May contain:

EMPTY

## May occur within:

[midi](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

midi

## <tuplet> tuplet

### Description:

A group of notes with "irregular" (sometimes called "irrational") rhythmic values, for example, three notes in the time normally occupied by two or nine in the time of five. The beam sub-element is allowed so that custom beaming may be indicated, e.g., a septuplet may be divided into a group of three plus a group of four notes. See Read, p. 187-215. The tuplet element may also be used for bowed tremolo (Read, p. 394) and double, triple, or flutter tonguing (Read, p. 348-349); that is, for repetition of the same pitch. In the case of irrational durations, such as two quarter notes in the time of five 8th notes in a measure of 5/8 time, decimal values may be used in the `dur.ges` attribute. For example, the `dur.ges` attribute would take the value "2.5" if the `midi.div` attribute's value was "1". The `num` and `numbase` attributes may be used for explicit labelling of a tuplet, such as, '3' with an 8th-note triplet, '3:2' over a quarter-note triplet, etc. The rendering of the ratio, however, is dependent on the `num.format` attribute found in the `att.vis.tuplet` attribute class.

### May contain:

[add](#), [app](#), [barline](#), [beam](#), [beatrpt](#), [bend](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corr](#), [custos](#), [damage](#), [del](#), [ftrem](#), [gap](#), [gliss](#), [halfmrpt](#), [handshift](#), [keysig](#), [ligature](#), [mensur](#), [note](#), [orig](#), [pad](#), [proport](#), [reg](#), [rest](#), [restore](#), [sic](#), [space](#), [subst](#), [supplied](#), [tuplet](#), [unclear](#)

### May occur within:

[add](#), [beam](#), [bend](#), [corr](#), [damage](#), [del](#), [gliss](#), [halfmrpt](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [mordent](#), [note](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [trill](#), [tuplet](#), [turn](#), [unclear](#), [uneume](#)

### Attributes:

- `beam.with`, optional, `xs:token`, above, below  
In the case of cross-staff beams, the `with` attribute is used to indicate which staff the beam is connected to; that is, the staff above or the staff below.
- `bracket.place`, optional, `xs:token`, above, below  
used to state where a tuplet bracket will be placed in relation to the noteheads.
- `bracket.visible`, optional, `xs:token`, true, false  
states whether a bracket should be rendered with a tuplet.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `dots`, optional, `xs:nonNegativeInteger`, 0 - 4  
records the number of augmentation dots required by a dotted duration.
- `dur`, optional, `xs:token`, long, breve, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, maxima, longa, brevis, semibrevis, minima, semiminima, fusa, semifusa  
captures the time taken up by the tuplet. Unlike other control events where the `dur` attribute is expressed as a time stamp, `dur` here is a true duration. If `dur` is omitted, the default is to calculate the total duration of the included notes and use the next shorter un-dotted value. Irrational durations, such as two quarter notes in the time of five 8th notes in 5/8 time, may be expressed as a list of durations which are to be added together to form the total duration of the tuplet. In this case, possible values for the `dur` attribute include "2 8" and "8 8 8 8".



- `dur.ges`, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as `measures[s]+ beat[s].beatpart`, `ppq` (MIDI clicks), `Humdrum **recip` values, or MusicXML 'divisions', etc.
- `dur.visible`, optional, `xs:token`, true, false  
determines if the tuplet duration is visible.
- `endid`, optional, `xs:IDREF`  
indicates the final element in a sequence of events to which the feature applies.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `layer`, optional, `xs:positiveInteger`  
identifies the layer to which a feature applies.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `next`, optional, `xs:IDREFS`  
used to point to the next event(s) in a user-defined collection.
- `num`, optional, `xs:positiveInteger`  
along with `numbase`, describes duration as a ratio. `num` is the first value in the ratio, while `numbase` is the second.
- `num.format`, optional, `xs:token`, count, ratio  
controls how the `num:numbase` ratio is to be displayed. When set to 'count' only the `num` attribute is displayed, e.g., '7'; however, when set to 'ratio', both the `num` and `numbase` attributes are displayed, e.g., '7:4'.
- `num.place`, optional, `xs:token`, above, below  
states where the tuplet number will be placed in relation to the noteheads.
- `num.visible`, optional, `xs:token`, true, false  
determines if the tuplet number is visible.
- `numbase`, optional, `xs:positiveInteger`  
along with `num`, describes duration as a ratio. `num` is the first value in the ratio, while `numbase` is the second.
- `prev`, optional, `xs:IDREFS`  
points to the previous event(s) in a user-defined collection.
- `sameas`, optional, `xs:IDREFS`  
points to an element that is the same as the current element but is not a literal copy of the current element.
- `staff`, optional, list of `xs:positiveInteger`, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- `startid`, optional, `xs:IDREF`  
holds a reference to the first element in a sequence of events to which the feature applies.
- `synch`, optional, `xs:IDREFS`  
points to elements that are synchronous with the current element.
- `tstamp`, optional, `xs:decimal`, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., `beats[fractional beat part]`
- `tstamp.ges`, optional, `xs:nonNegativeInteger`  
used to record the onset time in pulses per quarter note (`ppq`, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (`ppq`, MusicXML divisions, or MIDI clicks) since the start of the file.

- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

cmn

## Illustration:



## **<tupletspan> tuple span**

### Description:

Alternative element for encoding tuplets, especially useful for tuplets that extend across barlines. The starting point of the tuplet may be indicated by either a `tstamp`, `tstamp.ges`, `tstamp.real` or `startid` attribute, while the ending point may be recorded using a `dur`, `dur.ges` or `endid` attribute. It is a semantic error not to specify one starting and one ending type of attribute.

### May contain:

EMPTY

### May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

### Attributes:

- `beam.with`, optional, `xs:token`, `above`, `below`  
In the case of cross-staff beams, the `with` attribute is used to indicate which staff the beam is connected to; that is, the staff above or the staff below.
- `bracket.place`, optional, `xs:token`, `above`, `below`  
used to state where a tuplet bracket will be placed in relation to the noteheads.
- `bracket.visible`, optional, `xs:token`, `true`, `false`  
states whether a bracket should be rendered with a tuplet.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `dots`, optional, `xs:nonNegativeInteger`, 0 - 4  
records the number of augmentation dots required by a dotted duration.
- `dur`, optional, `xs:token`, `long`, `breve`, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, `maxima`, `longa`, `brevis`, `semibrevis`, `minima`, `semiminima`, `fusa`, `semifusa`  
captures the time taken up by the tuplet. Unlike other control events where the `dur` attribute is expressed

as a time stamp, dur here is a true duration. If dur is omitted, the default is to calculate the total duration of the included notes and use the next shorter un-dotted value. Irrational durations, such as two quarter notes in the time of five 8th notes in 5/8 time, may be expressed as a list of durations which are to be added together to form the total duration of the tuplet. In this case, possible values for the dur attribute include "2 8" and "8 8 8 8 8".

- dur.ges, optional, CDATA  
records performed duration information that differs from written duration. Its value may be expressed in any convenient form, such as measures[s]+ beat[s].beatpart, ppq (MIDI clicks), Humdrum \*\*recip values, or MusicXML 'divisions', etc.
- dur.visible, optional, xs:token, true, false  
determines if the tuplet duration is visible.
- endid, optional, xs:IDREF  
indicates the final element in a sequence of events to which the feature applies.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, optional, xs:positiveInteger  
along with numbase, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- num.format, optional, xs:token, count, ratio  
controls how the num:numbase ratio is to be displayed. When set to 'count' only the num attribute is displayed, e.g., '7'; however, when set to 'ratio', both the num and numbase attributes are displayed, e.g., '7:4'.
- num.place, optional, xs:token, above, below  
states where the tuplet number will be placed in relation to the noteheads.
- num.visible, optional, xs:token, true, false  
determines if the tuplet number is visible.
- numbase, optional, xs:positiveInteger  
along with num, describes duration as a ratio. num is the first value in the ratio, while numbase is the second.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- startid, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]

- `tstamp.ges`, optional, `xs:nonNegativeInteger`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `tstamp.real`, optional, `xs:time`  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

cmn

## <turn> *turn*

## Description:

An ornament consisting of four notes — the upper neighbor of the written note, the written note, the lower neighbor, and the written note. See Read, p. 246-247. Events may be contained within <turn> in order to record precise performance data. Whether the turn is accented or unaccented may be inferred from the timestamp — accented turns occur directly on the affected beat, unaccented ones do not.

## May contain:

[barline](#), [beam](#), [beatrpt](#), [bend](#), [btrem](#), [chord](#), [clefchange](#), [custos](#), [ftrem](#), [gliss](#), [halfmrpt](#), [keysig](#), [ligature](#), [mensur](#), [note](#), [pad](#), [proport](#), [rest](#), [space](#), [tuplet](#)

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [layer](#), [lem](#), [ligature](#), [measure](#), [orig](#), [ossia](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

- `accidlower`, optional, `xs:token`, s, f, ss, x, ff, xs, tb, n, nf, ns, su, sd, fu, fd, nu, nd  
records the written accidental associated with a lower neighboring note.
- `accidupper`, optional, `xs:token`, s, f, ss, x, ff, xs, tb, n, nf, ns, su, sd, fu, fd, nu, nd  
records the written accidental associated with an upper neighboring note.
- `color`, optional, `xs:token`, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- `copyof`, optional, `xs:IDREF`  
points to an element of which the current element is a copy.
- `corresp`, optional, `xs:IDREFS`  
used to point to other elements that correspond to this one in a generic fashion.
- `delayed`, optional, `xs:token`, true, false  
When the delayed attribute is set to 'yes', the turn begins on the second half of the beat. See Read, p. 246.
- `facs`, optional, `xs:IDREFS`  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- `form`, optional, `xs:token`, inv, norm  
indicates whether the turn begins on the note above (norm) or on the note below (inv).

- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **layer**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the layer within which a control event is active.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **place**, optional, xs:token, above, below, within  
captures the placement of the item with respect to the staff with which it is associated.
- **plist**, optional, xs:IDREFS  
contains a space separated list of ID references that identify logical events that participate in a collection, such as notes under a phrase mark.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **staff**, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **startid**, optional, xs:IDREF  
holds a reference to the first element in a sequence of events to which the feature applies.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **to**, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **vo**, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **x**, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac** attribute.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- **y**, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the **fac** attribute.

## Module:

cmnOrnaments

## <unclear> *unclear*

### Description:

Contains musical material that cannot be transcribed with certainty because it is illegible or inaudible in the source. Where the difficulty in transcription arises from an identifiable cause, the agent attribute signifies the causative agent. The cert attribute signifies the degree of certainty ascribed to the transcription of the text contained within the <unclear> element. Where the difficulty in transcription arises from action (partial deletion, etc.) assignable to an identifiable hand, the hand attribute signifies the hand responsible for the action. The reason attribute indicates why the material is difficult to transcribe. The resp attribute indicates the individual responsible for the transcription of the word, phrase, or passage contained with the <unclear> element. The value of resp must point to one or more identifiers declared in the document header. This element is modelled on an element in the Text Encoding Initiative (TEI).

### May contain:

PCDATA, [abbr](#), [accid](#), [add](#), [address](#), [annot](#), [arpeg](#), [artic](#), [barline](#), [beam](#), [beamspan](#), [beatrpt](#), [bend](#), [bibl](#), [breath](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corpname](#), [corr](#), [custos](#), [damage](#), [date](#), [del](#), [dir](#), [dot](#), [dynam](#), [expan](#), [extptr](#), [extref](#), [fermata](#), [fig](#), [ftrem](#), [gap](#), [geogname](#), [gliss](#), [hairpin](#), [halfmrpt](#), [handshift](#), [harm](#), [harppedal](#), [identifier](#), [ineume](#), [keysig](#), [layer](#), [lb](#), [ligature](#), [lyrics](#), [measure](#), [mensur](#), [midi](#), [mordent](#), [mrest](#), [mrpt](#), [mrpt2](#), [mspace](#), [multirest](#), [multirpt](#), [name](#), [note](#), [num](#), [octave](#), [orig](#), [pad](#), [pb](#), [pedal](#), [periodname](#), [persname](#), [phrase](#), [proport](#), [ptr](#), [ref](#), [reg](#), [reh](#), [rend](#), [repository](#), [rest](#), [restore](#), [section](#), [sic](#), [slur](#), [space](#), [stack](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [tempo](#), [tie](#), [title](#), [trill](#), [tuplet](#), [tupletspan](#), [turn](#), [unclear](#), [uneume](#)

### May occur within:

[abbr](#), [add](#), [addressline](#), [anchoredtext](#), [annot](#), [beam](#), [caption](#), [choice](#), [corpname](#), [corr](#), [damage](#), [del](#), [dir](#), [dynam](#), [ending](#), [expan](#), [fw](#), [geogname](#), [harm](#), [head](#), [identifier](#), [ineume](#), [inscription](#), [item](#), [l](#), [label](#), [layer](#), [lem](#), [measure](#), [name](#), [note](#), [num](#), [orig](#), [ossia](#), [p](#), [periodname](#), [persname](#), [pgfoot1](#), [pgfoot2](#), [pghead1](#), [pghead2](#), [rdg](#), [reg](#), [rend](#), [restore](#), [score](#), [section](#), [sic](#), [staff](#), [stylename](#), [subst](#), [supplied](#), [syl](#), [syllable](#), [td](#), [tempo](#), [th](#), [title](#), [tuplet](#), [unclear](#), [uneume](#)

### Attributes:

- agent, optional, CDATA  
signifies the causative agent of damage, illegibility, or other loss of original text.
- cert, optional, xs:token, high, medium, low, unknown  
signifies the degree of certainty or precision associated with a feature.
- evidence, optional, xs:NMTOKEN  
indicates the nature of the evidence supporting the reliability or accuracy of the intervention or interpretation. Suggested values include: 'internal', 'external', 'conjecture'.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- hand, optional, xs:IDREF  
signifies the hand responsible for an action. The value must be the ID of a <hand> element declared in the header.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.

- **reason**, optional, CDATA  
holds a short phrase describing the reason for missing textual material (gap), why material is supplied (supplied), or why transcription is difficult (unclear).
- **resp**, optional, xs:IDREFS  
captures information regarding responsibility for some aspect of the text's creation, transcription, editing, or encoding. Its value must point to one or more identifiers declared in the document header.
- **source**, optional, xs:IDREFS  
contains a list of one or more pointers indicating the sources which attest to a given reading. Each value should correspond to the ID of a <source> element located in the document header.
- **xml:id**, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

edittrans

## <uneume> *uninterrupted neume*

## Description:

A graphically-uninterrupted neume sign. While ineume is allowed as a sub-element of uneume here as part of the model.eventLike.neume class, it is unlikely that an uninterrupted neume containing an interrupted neume is a meaningful construct.

## May contain:

[add](#), [app](#), [barline](#), [beam](#), [beatrpt](#), [bend](#), [btrem](#), [choice](#), [chord](#), [clefchange](#), [corr](#), [custos](#), [damage](#), [del](#), [ftrem](#), [gap](#), [gliss](#), [halfmrpt](#), [handshift](#), [keysig](#), [ligature](#), [mensur](#), [note](#), [orig](#), [pad](#), [proport](#), [reg](#), [rest](#), [restore](#), [sic](#), [space](#), [subst](#), [supplied](#), [tuplet](#), [unclear](#), [verse](#)

## May occur within:

[add](#), [corr](#), [damage](#), [del](#), [ineume](#), [layer](#), [lem](#), [ligature](#), [orig](#), [rdg](#), [reg](#), [restore](#), [sic](#), [supplied](#), [syllable](#), [unclear](#)

## Attributes:

- **altsym**, optional, xs:IDREF  
provides a way of pointing to a user-defined symbol. It must contain an ID of a <symboldef> element elsewhere in the document.
- **color**, optional, xs:token, "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"  
used to indicate visual appearance. Do not confuse this with the musical term 'color' as used in pre-CMN notation.
- **copyof**, optional, xs:IDREF  
points to an element of which the current element is a copy.
- **corresp**, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- **facs**, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- **form**, optional, xs:token, liquescent1, liquescent2, liquescent3, quilismatic, rectangular, rhombic, tied  
provides a subclass or functional label for the neume.

- **hfunc**, optional, xs:NMTOKEN  
describes harmonic function in any convenient typology.
- **ho**, optional, xs:decimal  
records a horizontal adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- **inth**, optional, xs:NMTOKENS  
encodes the harmonic interval between this note and other pitches occurring at the same time.
- **intm**, optional, xs:NMTOKEN  
encodes the melodic interval from the previous pitch.
- **layer**, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- **mfunc**, optional, xs:NMTOKEN  
describes melodic function in any convenient typology.
- **n**, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- **name**, optional, xs:token, punctum, virga, pes, clivis, torculus, torculusresupinus, porrectus, porrectusflexus, apostropha, oriscus, pressusmaior, pressusminor, virgastrata  
records the name of an uninterrupted neume.
- **next**, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- **prev**, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- **psolfa**, optional, CDATA  
contains solfa designation, e.g., do, re, mi, etc., in either a fixed or movable Do system.
- **sameas**, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- **size**, optional, xs:token, normal, cue  
describes the relative size of a feature.
- **staff**, optional, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- **subtype**, optional, xs:NMTOKEN  
provide any sub-classification for the element, additional to that given by its type attribute.
- **syl**, optional, CDATA  
holds an associated sung text syllable.
- **synch**, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- **tstamp**, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[fractional beat part]
- **tstamp.ges**, optional, xs:nonNegativeInteger  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **tstamp.real**, optional, xs:time  
used to record the onset time in pulses per quarter note (ppq, MusicXML divisions, or MIDI clicks) since the start of the file.
- **type**, optional, xs:NMTOKEN  
characterizes the element in some sense, using any convenient classification scheme or typology.
- **visible**, optional, xs:token, true, false  
indicates if a feature should be rendered when the notation is presented graphically or sounded.



- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

**Module:**

neumes

**<unpub> unpublished**

**Description:**

Used to explicitly indicate that a bibliographic source is unpublished. A short phrase indicating the nature of or the reason for the unpublished status may be given as the element's content.

**May contain:**

EMPTY

**May occur within:**

[pubstmt](#)

**Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

**Module:**

header

## **<userrestrict> usage restrictions**

### **Description:**

Container for information about the conditions that affect use of a bibliographic item after access has been granted. It may indicate limitations imposed by an owner, repository, or legal statute (for example, copyright law) regarding the reproduction, publication, or quotation of the item. It may also indicate the absence of restrictions, such as when rights have been ceded to the public domain. Do not confuse this element with the <accessdesc> element, which holds information about conditions affecting the availability of the material. This element is modelled on an element in Encoded Archival Description (EAD).

### **May contain:**

PCDATA, [abbr](#), [address](#), [bibl](#), [corpname](#), [date](#), [expan](#), [extptr](#), [extref](#), [fig](#), [geogname](#), [identifier](#), [lb](#), [name](#), [num](#), [periodname](#), [persname](#), [ptr](#), [ref](#), [rend](#), [repository](#), [stack](#), [stylename](#), [title](#)

### **May occur within:**

[availability](#)

### **Attributes:**

- analog, optional, CDATA  
contains a reference to a field or element in another descriptive encoding system to which an MEI element is comparable. Mapping elements from one system to another may help a repository harvest selected data from the MEI file to build a basic catalog record. The encoding system from which fields are taken must be specified. When possible, subfields as well as fields should be specified, e.g., subfields within MARC fields.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

header

## **<vel> velocity**

### **Description:**

MIDI Note-on/off velocity. The num attribute must be in the range 0-127.

### **May contain:**

EMPTY

### **May occur within:**

[midi](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- form, required, xs:token, on, off  
indicates whether this is note-on or note-off velocity data.
- layer, optional, xs:positiveInteger  
identifies the layer to which a feature applies.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- num, required, xs:nonNegativeInteger, 0 - 127  
records a MIDI number.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- staff, required, list of xs:positiveInteger, minimum length of 1  
signifies the staff on which a notated event occurs or to which a control event applies.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- tstamp, optional, xs:decimal, 0 -  $\infty$   
encodes the onset time in terms of musical time, i.e., beats[.fractional beat part]
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources.  
Each id attribute within a document must have a unique value.

## Module:

midi

## <verse> verse

## Description:

Lyric verse. The lb element is allowed here in order to facilitate karaoke applications. The func attribute on lb may be used to distinguish true line ends from line group ends for these applications.

## May contain:

[dir](#), [dynam](#), [lb](#), [space](#), [syl](#), [tempo](#)

## May occur within:

[ineume](#), [lem](#), [lyrics](#), [note](#), [rdg](#), [syllable](#), [uneume](#)

## Attributes:

- copyof, optional, xs:IDREF  
points to an element of which the current element is a copy.
- corresp, optional, xs:IDREFS  
used to point to other elements that correspond to this one in a generic fashion.
- facs, optional, xs:IDREFS  
permits the current element to reference a facsimile image or image zone which corresponds to it.
- fontfam, optional, xs:token  
contains the name of a font-family.
- fontname, optional, xs:token  
records the name of the font.
- fontsize, optional, xs:decimal  
indicates the size of the font in printers' points, i.e., 1/72nd of an inch.
- fontstyle, optional, xs:token, ital, normal, oblique  
records the style of the font, i.e, italic, oblique, or normal.
- fontweight, optional, xs:token, bold  
used to indicate bold type.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- next, optional, xs:IDREFS  
used to point to the next event(s) in a user-defined collection.
- prev, optional, xs:IDREFS  
points to the previous event(s) in a user-defined collection.
- refrain, optional, xs:token, true, false  
used to indicate a common, usually centered, refrain (Mup User's Guide, p. 44).
- rhythm, optional, CDATA  
used to specify a rhythm for the lyrics that differs from that of the notes on the staff.
- sameas, optional, xs:IDREFS  
points to an element that is the same as the current element but is not a literal copy of the current element.
- synch, optional, xs:IDREFS  
points to elements that are synchronous with the current element.
- to, optional, xs:decimal  
records a timestamp adjustment of a feature's programmatically-determined location in musical terms; that is, beats.
- vo, optional, xs:decimal  
records the vertical adjustment of a feature's programmatically-determined location in terms of staff interline distance; that is, units of 1/2 the distance between adjacent staves.
- x, optional, xs:decimal  
encodes an x coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.
- xml:lang, optional, xs:language  
identifies the language of the word or text phrase marked. The values for this attribute are language 'tags' as defined in BCP 47. All language tags that make use of private use subtags must be documented in a corresponding language element in the MEI header whose id attribute is the same as the language tag's value.

- y, optional, xs:decimal  
encodes an y coordinate for a feature in an output coordinate system. When it is necessary to record the placement of a feature in a facsimile image, use the facs attribute.

## Module:

lyrics

## <when> when

## Description:

Indicates a point in time either absolutely (using the absolute attribute), or relative to other elements in the same timeline element (using the interval and since attributes). The data attribute may be used to reference one or more features that occur at this point in time. This element is modelled on an element in the Text Encoding Initiative (TEI).

## May contain:

EMPTY

## May occur within:

[timeline](#)

## Attributes:

- absolute, optional, CDATA  
provides an absolute value for the time associated with a point on a timeline. This attribute is required for the element designated as the origin by the parent timeline.
- data, optional, xs:IDREFS  
used to link metadata elements to one or more data-containing elements.
- interval, optional, xs:decimal, 1 -  $\infty$   
specifies the (positive) numeric portion of a time interval.
- n, optional, xs:NMTOKEN  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- since, optional, xs:IDREF  
identifies the reference point for determining the time of the current when element, which is obtained by adding the interval to the time of the reference point. The value should be the ID of another when element in the same timeline. If the since attribute is omitted and the absolute attribute is not specified, then the reference point is understood to be the preceding when element.
- unit, optional, xs:NMTOKEN  
indicates the units used for a measurement, usually using the standard symbol for the desired unit.
- xml:id, optional, xs:ID  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

## Module:

linkalign

## **<zone> zone**

### **Description:**

Defines a rectangular area contained within a surface. This element is modelled on an element in the Text Encoding Initiative (TEI).

### **May contain:**

[figdesc](#), [graphic](#)

### **May occur within:**

[surface](#)

### **Attributes:**

- `lrx`, optional, `xs:nonNegativeInteger`  
indicates the lower-right corner x coordinate.
- `lry`, optional, `xs:nonNegativeInteger`  
indicates the lower-left corner x coordinate.
- `n`, optional, `xs:NMTOKEN`  
provides a label (name or number) for an element. While its value need not be unique, it is required to be a single token.
- `ulx`, optional, `xs:nonNegativeInteger`  
indicates the upper-left corner x coordinate.
- `uly`, optional, `xs:nonNegativeInteger`  
indicates the upper-left corner y coordinate.
- `xml:id`, optional, `xs:ID`  
regularizes the naming of an element and thus facilitates building links between it and other resources. Each id attribute within a document must have a unique value.

### **Module:**

facsimile

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