**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.

**May contain:**

TEXT, 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

**Used by:**

model.editorialLike

**Attributes:**

* cert, data.CERTAINTY, optional
* evidence, NMTOKEN, optional
* expan, TEXT, optional
* facs, IDREFS, optional
* hand, IDREF, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* resp, IDREFS, optional
* seq, data.INTEGERPOSITIVE, optional
* source, IDREFS, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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 <userestrict> (usage restrictions), which captures information about limitations on the use of material, such as those afforded by copyright.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

availability

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<accid> accidental***

**Description:**

This element captures a temporary alteration to the pitch of a note. It provides an alternative to the accid 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 different functions, such as 'cautionary' or 'editorial'.

**May contain:**

EMPTY

**Used by:**

model.noteModifierLike

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* enclose, data.ENCLOSURE, optional
* facs, IDREFS, optional
* fontfam, data.FONTFAMILY, optional
* fontname, data.FONTNAME, optional
* fontsize, data.NUMBER, optional
* fontstyle, data.FONTSTYLE, optional
* fontweight, data.FONTWEIGHT, optional
* func, TOKEN, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, TOKEN, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* value, data.ACCIDENTAL.EXPLICIT, required
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<acqsource> acquisition source***

**Description:**

Post-publication source from which access to a bibliographic item may be obtained, e.g. vendor, distributor, etc.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

availability

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<add> addition***

**Description:**

Marks an addition to the musical 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.

**May contain:**

TEXT, 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

**Used by:**

model.transcriptionLike

**Attributes:**

* cert, data.CERTAINTY, optional
* evidence, NMTOKEN, optional
* facs, IDREFS, optional
* hand, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional
* resp, IDREFS, optional
* seq, data.INTEGERPOSITIVE, optional
* source, IDREFS, optional

**Module:**

edittrans

***<address> address***

**Description:**

Contains a postal address, for example of a publisher, an organization, or an individual.

**May contain:**

addressline

**Used by:**

model.addressLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**Module:**

shared

***<addressline> addressline***

**Description:**

Single line of a postal address. This element may be repeated as many times as necessary to enter all available lines of an address.

**May contain:**

TEXT, 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

**Used by:**

address

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**Module:**

shared

***<altmeiid> alternative MEI id***

**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:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

meihead

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

header

***<anchoredtext> anchored text***

**Description:**

Page-anchored text. 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:**

TEXT, 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

**Used by:**

model.graphicprimitiveLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* startid, IDREF, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* type, NMTOKEN, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.annotLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endid, IDREF, optional
* entityref, ENTITY, optional
* facs, IDREFS, optional
* fragment, data.FRAGMENT, optional
* id, ID, optional
* lang, TEXT, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* resp, IDREFS, optional
* sameas, IDREFS, optional
* source, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* startid, IDREF, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* type, NMTOKEN, optional
* when, IDREF, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**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.).

**May contain:**

lem, rdg

**Used by:**

model.appLike

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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.

**May contain:**

application

**Used by:**

encodingdesc

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<application> application***

**Description:**

Provides information about an application which has acted upon the document.

**May contain:**

name, p, ptr

**Used by:**

appinfo

**Attributes:**

* calendar, NMTOKEN, optional
* cert, data.CERTAINTY, optional
* from, data.ISODATE, optional
* id, ID, optional
* n, NMTOKEN, optional
* notafter, data.ISODATE, optional
* notbefore, data.ISODATE, optional
* reg, data.ISODATE, optional
* subtype, NMTOKEN, optional
* to, data.ISODATE, optional
* type, NMTOKEN, optional
* version, TEXT, optional

**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 usual symbol is a vertical wavy line preceding the chord.

**May contain:**

EMPTY

**Used by:**

model.controleventLike

**Attributes:**

* arrow, data.BOOLEAN, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dir, TOKEN, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

cmn

***<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

**Used by:**

chord, model.noteModifierLike

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* enclose, data.ENCLOSURE, optional
* facs, IDREFS, optional
* fontfam, data.FONTFAMILY, optional
* fontname, data.FONTNAME, optional
* fontsize, data.NUMBER, optional
* fontstyle, data.FONTSTYLE, optional
* fontweight, data.FONTWEIGHT, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* value, data.ARTICULATIONS, required
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<availability> availability***

**Description:**

Groups elements that describe the availability of and access to a bibliographic item, including the MEI-encoded document itself.

**May contain:**

accessdesc, acqsource, price, sysreq, userestrict

**Used by:**

model.pubstmtPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<back> back***

**Description:**

Back matter such as indexes, advertisements, etc. following the main part of a text.

**May contain:**

div, lb, pb

**Used by:**

model.backLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**Module:**

text

***<barline> barline***

**Description:**

Vertical line that divides musical notation into metrical units. This element is provided as an alternative to the <measure> container.

**May contain:**

EMPTY

**Used by:**

model.eventLike

**Attributes:**

* barplace, data.BARPLACE, optional
* color, data.COLOR, optional
* complete, TOKEN, optional
* control, data.BOOLEAN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* entityref, ENTITY, optional
* facs, IDREFS, optional
* fragment, data.FRAGMENT, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* rend, data.BARRENDITION, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* taktplace, data.STAFFLOC, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* tstamp, TEXT, optional
* when, IDREF, optional
* width, data.NUMBER, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**Module:**

shared

***<barre> barre***

**Description:**

An indication of fingering in a chord tablature grid. The from and to attributes should each contain the id of a <chordmember> element.

**May contain:**

EMPTY

**Used by:**

chorddef

**Attributes:**

* fret, data.FRET, required
* from, IDREF, required
* id, ID, optional
* n, NMTOKEN, optional
* to, IDREF, required

**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 beamgroup attribute on these elements.

**May contain:**

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

**Used by:**

model.eventLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* rend, TOKEN, optional
* sameas, IDREFS, optional
* slope, data.NUMBER, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional
* with, data.PLACE, optional

**Module:**

cmn

***<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

**Used by:**

model.controleventLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endid, IDREF, optional
* facs, IDREFS, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* rend, TOKEN, optional
* sameas, IDREFS, optional
* slope, data.NUMBER, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startid, IDREF, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional
* with, data.PLACE, optional

**Module:**

cmn

***<beatrpt> beat repeat***

**Description:**

An indication that material on a preceding beat should be repeated.

**May contain:**

EMPTY

**Used by:**

model.eventLike

**Attributes:**

* altsym, IDREF, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* expand, data.BOOLEAN, optional
* facs, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* rend, data.BEATRPT.REND, required
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional

**Module:**

cmn

***<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

**Used by:**

model.eventLike

**Attributes:**

* amount, data.BEND.AMOUNT, optional
* bezier, NMTOKENS, optional
* bulge, NMTOKENS, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* endvo, data.VISUALOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* rend, data.CURVERENDITION, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* startvo, data.VISUALOFFSET, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* x2, data.NUMBER, optional
* y, data.NUMBER, optional
* y2, data.NUMBER, optional

**Module:**

cmn

***<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:**

TEXT, 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

**Used by:**

model.biblLike

**Attributes:**

* entityref, ENTITY, optional
* facs, IDREFS, optional
* fragment, data.FRAGMENT, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**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.

**May contain:**

bibl, blockquote, lg, list, p, table

**Used by:**

model.quoteLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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.

**May contain:**

mdiv

**Used by:**

model.musicPart

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**Module:**

shared

***<breath> breath mark***

**Description:**

The breath element is a specialized form of, i.e., syntactic sugar for, dir/@type="breathmark" with "," (comma) as its PCDATA content. 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

**Used by:**

model.controleventLike

**Attributes:**

* altsym, IDREF, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* endid, IDREF, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startid, IDREF, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

cmn

***<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.

**May contain:**

chord, note

**Used by:**

model.eventLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* form, TOKEN, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERPOSITIVE, optional
* num.place, data.PLACE, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* slash, data.SLASH, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional

**Module:**

cmn

***<caption> caption***

**Description:**

A label which accompanies an illustration or a table.

**May contain:**

TEXT, 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

**Used by:**

model.captionLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**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

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.MIDIVALUE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* val, data.MIDIVALUE, required
* when, IDREF, optional

**Module:**

midi

***<chan> channel***

**Description:**

MIDI channel assignment.

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.MIDICHANNEL, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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.

**May contain:**

changedesc, date, respstmt

**Used by:**

revisiondesc

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<changedesc> change description***

**Description:**

Description of a revision of the MEI file.

**May contain:**

p

**Used by:**

change

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.MIDIVALUE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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.

**May contain:**

abbr, choice, corr, expan, orig, reg, sic, unclear

**Used by:**

choice, model.editLike

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**Module:**

edittrans

***<chord> chord***

**Description:**

A simultaneous sounding of 2 or more notes in the same layer \*with the same duration\*.

**May contain:**

artic, note

**Used by:**

btrem, ftrem, model.eventLike

**Attributes:**

* altsym, IDREF, optional
* artic, data.ARTICULATIONS, optional
* artic.ges, data.ARTICULATIONS, optional
* beam, data.BEAMS, optional
* beam.with, data.PLACE, optional
* breaksec, data.INTEGERPOSITIVE, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* detune, TEXT, optional
* dot.ho, data.VISUALOFFSET, optional
* dot.vo, data.VISUALOFFSET, optional
* dot.x, data.NUMBER, optional
* dot.y, data.NUMBER, optional
* dots, data.AUGMENTDOT, optional
* dur, data.DURATION, optional
* dur.ges, TEXT, optional
* facs, IDREFS, optional
* fermata, data.PLACE, optional
* grace, data.GRACE, optional
* grace.time, data.PERCENT, optional
* headshape, data.CLUSTER, optional
* hfunc, TEXT, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* instr, IDREF, optional
* layer, data.INTEGERPOSITIVE, optional
* lv, data.BOOLEAN, optional
* mfunc, TEXT, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* size, data.SIZE, optional
* slur, data.SLURS, optional
* slur.dir, data.SLURDIRECTION, optional
* slur.rend, TOKEN, optional
* staff, data.INTEGERPOSITIVE, optional
* stem.dir, data.STEMDIRECTION, optional
* stem.len, data.NUMBER, optional
* stem.mod, data.STEMMODIFIER, optional
* stem.pos, data.STEMPOSITION, optional
* stem.with, data.PLACE, optional
* stem.x, data.NUMBER, optional
* stem.y, data.NUMBER, optional
* syl, TEXT, optional
* synch, IDREFS, optional
* tie, data.TIE, optional
* tie.dir, data.TIEDIRECTION, optional
* tie.rend, TOKEN, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* tuplet, data.TUPLET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<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.

**May contain:**

barre, chordmember

**Used by:**

chordtable

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional
* pos, TEXT, optional

**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'.

**May contain:**

EMPTY

**Used by:**

chorddef

**Attributes:**

* accid, data.ACCIDENTAL.IMPLICIT, optional
* fing, data.FINGER.FRET, optional
* fret, data.FRET, optional
* id, ID, optional
* inth, TEXT, optional
* n, NMTOKEN, optional
* oct, data.OCTAVE, optional
* pname, data.PITCHNAME, required

**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

**Used by:**

model.chordtableLike

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

classification

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

profiledesc, source

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

clefchange, model.staffdefPart

**Attributes:**

* altsym, IDREF, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dis, data.OCTAVE.DIS, optional
* dis.place, data.PLACE, optional
* facs, IDREFS, optional
* id, ID, optional
* line, data.CLEFLINE, required
* n, NMTOKEN, optional
* next, IDREFS, optional
* octave.default, data.OCTAVE, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* shape, data.CLEFSHAPE, required
* synch, IDREFS, optional
* when, IDREF, optional

**Module:**

shared

***<clefchange> clef change***

**Description:**

A change of clef not occurring at a barline.

**May contain:**

clef

**Used by:**

model.eventLike

**Attributes:**

* altsym, IDREF, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dis, data.OCTAVE.DIS, optional
* dis.place, data.PLACE, optional
* facs, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* line, data.CLEFLINE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* octave.default, data.OCTAVE, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* shape, data.CLEFSHAPE, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional

**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.).

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.nameLike.agent

**Attributes:**

* analog, TEXT, optional
* authority, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* key, NMTOKEN, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* reg, TEXT, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

namesdates

***<corr> correction***

**Description:**

Contains the correct form of an apparent erroneous passage. 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.

**May contain:**

TEXT, 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

**Used by:**

model.choicePart, model.transcriptionLike

**Attributes:**

* cert, data.CERTAINTY, optional
* evidence, NMTOKEN, optional
* hand, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional
* resp, IDREFS, optional
* seq, data.INTEGERPOSITIVE, optional
* source, IDREFS, optional

**Module:**

edittrans

***<correction> correction***

**Description:**

States how and under what circumstances corrections have been made in the musical text.

**May contain:**

p

**Used by:**

model.editorialdeclPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* method, TOKEN, optional
* n, NMTOKEN, optional
* status, TOKEN, optional

**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.

**May contain:**

blockquote, lg, list, p, table

**Used by:**

profiledesc

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<cue> cue***

**Description:**

MIDI cue point.

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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

**Used by:**

model.graphicprimitiveLike

**Attributes:**

* bezier, NMTOKENS, optional
* bulge, NMTOKENS, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* endvo, data.VISUALOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* rend, data.CURVERENDITION, optional
* sameas, IDREFS, optional
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* startvo, data.VISUALOFFSET, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* type, NMTOKEN, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* x2, data.NUMBER, optional
* y, data.NUMBER, optional
* y2, data.NUMBER, optional

**Module:**

usersymbols

***<custos> custos***

**Description:**

The symbol placed at the end of a staff to indicate the first note of the next staff. Sometimes called a "direct".

**May contain:**

EMPTY

**Used by:**

model.eventLike, sb

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* oct, data.OCTAVE, required
* pname, data.PITCHNAME, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* source, IDREFS, optional
* synch, IDREFS, optional
* target, IDREF, optional
* when, IDREF, optional

**Module:**

shared

***<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.

**May contain:**

TEXT, 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

**Used by:**

model.transcriptionLike

**Attributes:**

* agent, TEXT, optional
* degree, TEXT, optional
* extent, TEXT, optional
* facs, IDREFS, optional
* hand, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

edittrans

***<date> date***

**Description:**

A date in any format.

**May contain:**

TEXT, 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

**Used by:**

model.dateLike

**Attributes:**

* analog, TEXT, optional
* calendar, NMTOKEN, optional
* cert, data.CERTAINTY, optional
* facs, IDREFS, optional
* from, data.ISODATE, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* notafter, data.ISODATE, optional
* notbefore, data.ISODATE, optional
* reg, data.ISODATE, optional
* to, data.ISODATE, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.transcriptionLike

**Attributes:**

* facs, IDREFS, optional
* hand, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional
* rend, TEXT, optional
* seq, data.INTEGERPOSITIVE, optional

**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.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional
* unit, TEXT, optional

**Module:**

header

***<dir> directive***

**Description:**

A text expression that is on the score (typically above, below, or between staves), but not on the staff and not encoded elsewhere in more specific elements, such as <tempo> or <dynam>. Examples include text strings, such as 'affettuoso' or fingerings and music symbols, such as segno and coda symbols, fermatas over a barline, etc. Unlike generic text elements, directives can be control elements. That is, they can be used as pointers 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:**

TEXT, 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

**Used by:**

model.controleventLike, verse

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* lang, TEXT, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* type, NMTOKEN, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<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.

**May contain:**

blockquote, div, head, lb, lg, list, p, pb, table

**Used by:**

model.divLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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

**Used by:**

model.noteModifierLike

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* form, TOKEN, optional
* id, ID, optional
* loc, data.STAFFLOC, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<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.

**May contain:**

TEXT, 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

**Used by:**

model.controleventLike, verse

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* lang, TEXT, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* value, data.MIDIVALUE, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<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.).

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.editionLike

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

shared

***<editionstmt> edition statement***

**Description:**

Container for meta-data pertaining to a particular edition of the material being described.

**May contain:**

edition, respstmt

**Used by:**

filedesc, source

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<editorialdecl> editorial declaration***

**Description:**

Used to provide details of editorial principles and practices applied during the encoding of musical text.

**May contain:**

correction, interpretation, normalization, p, segmentation, stdvals

**Used by:**

encodingdesc

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

appinfo, editorialdecl, projectdesc, samplingdecl

**Used by:**

model.headerPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<ending> ending***

**Description:**

Alternative ending for a repeated section of music. 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

**Used by:**

model.endingLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* entityref, ENTITY, optional
* facs, IDREFS, optional
* fragment, data.FRAGMENT, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* type, NMTOKEN, optional
* when, IDREF, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**Module:**

shared

***<exhibithist> exhibition history***

**Description:**

A record of public exhibitions, including dates, venues, etc.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.editorialLike

**Attributes:**

* abbr, TEXT, optional
* cert, data.CERTAINTY, optional
* evidence, NMTOKEN, optional
* facs, IDREFS, optional
* hand, IDREF, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* resp, IDREFS, optional
* seq, data.INTEGERPOSITIVE, optional
* source, IDREFS, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

shared

***<expansion> expansion***

**Description:**

Indicates how a section may be programmatically expanded into its 'through-composed' form. See Read, p. 229 (ex. 12-16).

**May contain:**

EMPTY

**Used by:**

ending, section

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional
* plist, IDREFS, optional
* source, IDREFS, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

filedesc, model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional
* unit, TEXT, optional

**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.

**May contain:**

EMPTY

**Used by:**

model.locrefLike

**Attributes:**

* entityref, ENTITY, optional
* fragment, data.FRAGMENT, optional
* id, ID, optional
* mimetype, TEXT, optional
* n, NMTOKEN, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.locrefLike

**Attributes:**

* entityref, ENTITY, optional
* fragment, data.FRAGMENT, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**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.

**May contain:**

surface

**Used by:**

model.facsimileLike

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional
* source, IDREFS, optional

**Module:**

facsimile

***<fermata> fermata***

**Description:**

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. 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

**Used by:**

model.controleventLike

**Attributes:**

* altsym, IDREF, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur.ges, TEXT, optional
* endid, IDREF, optional
* facs, IDREFS, optional
* form, TOKEN, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startid, IDREF, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

cmn

***<fig> figure***

**Description:**

groups elements representing or containing graphic information such as an illustration or figure.

**May contain:**

caption, figdesc, graphic

**Used by:**

model.figureLike

**Attributes:**

* entityref, ENTITY, optional
* facs, IDREFS, optional
* fragment, data.FRAGMENT, optional
* id, ID, optional
* n, NMTOKEN, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* x, data.NUMBER, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional
* y, data.NUMBER, optional

**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.

**May contain:**

TEXT, anchoredtext, annot, blockquote, curve, lg, line, list, p, symbol, table

**Used by:**

fig, model.figdescLike

**Attributes:**

* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**Module:**

figtable

***<filedesc> file description***

**Description:**

Contains a full bibliographic description of the MEI file. Extent in this context is file size.

**May contain:**

editionstmt, extent, fingerprint, notesstmt, pubstmt, seriesstmt, sourcedesc, titlestmt

**Used by:**

meihead

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

filedesc

**Attributes:**

* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**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.

**May contain:**

div, lb, pb, titlepage

**Used by:**

model.frontLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**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 &amp; triple tonguing, and flutter tonguing) use the <btrem> element.

**May contain:**

chord, note

**Used by:**

model.eventLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* form, TOKEN, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* slash, data.SLASH, required
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional

**Module:**

cmn

***<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.

**May contain:**

TEXT, 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

**Used by:**

pb

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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.

**May contain:**

EMPTY

**Used by:**

model.editLike

**Attributes:**

* cert, data.CERTAINTY, optional
* evidence, NMTOKEN, optional
* extent, TEXT, optional
* hand, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional
* reason, TEXT, optional
* resp, IDREFS, optional
* source, IDREFS, optional
* unit, TEXT, optional

**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. May contain name sub-parts in <geogname> sub-elements.

**May contain:**

TEXT, 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

**Used by:**

model.nameLike.geogname

**Attributes:**

* analog, TEXT, optional
* authority, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* key, NMTOKEN, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* reg, TEXT, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

namesdates

***<gliss> glissando***

**Description:**

An indication to perform notes between the written pitches at a tempo such that the intermediate pitches are not heard individually. Sometimes called a 'slide'. Precise performance data, that is, exact pitches, may be recorded within the <gliss> element. The starting point of the glissand sign 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

**Used by:**

model.eventLike

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* endvo, data.VISUALOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* rend, data.LINERENDITION, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* startvo, data.VISUALOFFSET, optional
* synch, IDREFS, optional
* text, TEXT, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* x2, data.NUMBER, optional
* y, data.NUMBER, optional
* y2, data.NUMBER, optional

**Module:**

cmn

***<graphic> graphic***

**Description:**

Indicates the location of an inline graphic, illustration, or figure.

**May contain:**

EMPTY

**Used by:**

model.graphicLike

**Attributes:**

* entityref, ENTITY, optional
* facs, IDREFS, optional
* fragment, data.FRAGMENT, optional
* height, data.INTEGERPOSITIVE, optional
* id, ID, optional
* mimetype, TEXT, optional
* n, NMTOKEN, optional
* unit, TEXT, optional
* width, data.INTEGERPOSITIVE, optional
* xlink:href, data.URI, optional

**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.

**May contain:**

group, music

**Used by:**

group, model.musicPart

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**Module:**

shared

***<grpsym> group symbol***

**Description:**

A brace or bracket used to join two or more staves to create a system or to group staves within a system. 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

**Used by:**

staffgrp

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* symbol, TOKEN, required
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<hairpin> hairpin***

**Description:**

Indicates continuous dynamics expressed on the score as 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.

**May contain:**

EMPTY

**Used by:**

model.controleventLike

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* endvo, data.VISUALOFFSET, optional
* facs, IDREFS, optional
* form, TOKEN, required
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* startvo, data.VISUALOFFSET, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* width, data.NUMBER, optional
* x, data.NUMBER, optional
* x2, data.NUMBER, optional
* y, data.NUMBER, optional
* y2, data.NUMBER, optional

**Module:**

cmn

***<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

**Used by:**

model.eventLike

**Attributes:**

* altsym, IDREF, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.DURATION, optional
* expand, data.BOOLEAN, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional

**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.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

handlist

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* initial, data.BOOLEAN, optional
* medium, TEXT, optional
* n, NMTOKEN, optional
* resp, IDREFS, optional

**Module:**

header

***<handlist> hand list***

**Description:**

Container for one or more hand elements.

**May contain:**

hand

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

EMPTY

**Used by:**

model.editLike

**Attributes:**

* cert, data.CERTAINTY, optional
* character, TEXT, optional
* evidence, NMTOKEN, optional
* facs, IDREFS, optional
* id, ID, optional
* medium, TEXT, optional
* n, NMTOKEN, optional
* new, IDREF, optional
* old, IDREF, optional
* resp, IDREFS, optional
* source, IDREFS, optional

**Module:**

edittrans

***<harm> harmony***

**Description:**

A textual 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.

**May contain:**

TEXT, 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

**Used by:**

model.harmLike

**Attributes:**

* chordref, IDREF, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* extender, data.BOOLEAN, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* rendgrid, TOKEN, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

harmony

***<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

**Used by:**

model.controleventLike

**Attributes:**

* a, TOKEN, optional
* b, TOKEN, optional
* c, TOKEN, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* d, TOKEN, optional
* dur.ges, TEXT, optional
* e, TOKEN, optional
* endid, IDREF, optional
* f, TOKEN, optional
* facs, IDREFS, optional
* g, TOKEN, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startid, IDREF, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.headLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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:**

TEXT, 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

**Used by:**

model.identifierLike

**Attributes:**

* analog, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

shared

***<ineume> interrupted neume***

**Description:**

a graphically interrupted neume; that is, a neume which is logically a single entity 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

**Used by:**

model.eventLike.neumes

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* form, data.INEUMEFORM, optional
* id, ID, optional
* n, NMTOKEN, optional
* name, data.INEUMENAME, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* type, NMTOKEN, optional
* when, IDREF, optional

**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:**

TEXT, 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

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

model.instrdefLike

**Attributes:**

* id, ID, optional
* midi.channel, data.MIDICHANNEL, optional
* midi.duty, data.PERCENT, optional
* midi.instr, data.MIDIVALUE, optional
* midi.instrname, data.MIDINAMES, optional
* midi.port, data.MIDIVALUE, optional
* midi.track, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional

**Module:**

shared

***<instrgrp> instrument group***

**Description:**

Collects MIDI instrument definitions.

**May contain:**

instrdef

**Used by:**

scoredef

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**Module:**

shared

***<interpretation> interpretation***

**Description:**

Describes the scope of any analytic or interpretive information added to the transcription of the music.

**May contain:**

p

**Used by:**

model.editorialdeclPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<item> item***

**Description:**

Single item in a <list>.

**May contain:**

TEXT, 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

**Used by:**

list

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

model.keyaccidLike

**Attributes:**

* enclose, data.ENCLOSURE, optional
* facs, IDREFS, optional
* form, TOKEN, optional
* id, ID, optional
* n, NMTOKEN, optional
* oct, data.OCTAVE, optional
* pname, data.PITCHNAME, required
* staffloc, data.STAFFLOC, optional
* value, data.ACCIDENTAL.EXPLICIT, required
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<keychange> key change***

**Description:**

Change of key signature.

**May contain:**

keyaccid

**Used by:**

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

model.keysigLike

**Attributes:**

* accid, data.ACCIDENTAL.EXPLICIT, optional
* facs, IDREFS, optional
* id, ID, optional
* mode, data.MODE, optional
* n, NMTOKEN, optional
* pname, data.PITCHNAME, optional

**Module:**

shared

***<keywords> keywords***

**Description:**

Collection of keywords or text phrases which describe the work.

**May contain:**

term

**Used by:**

classification

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<l> line***

**Description:**

Contains a single line of text. 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.

**May contain:**

TEXT, 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

**Used by:**

model.lLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**Module:**

text

***<label> label***

**Description:**

A text string that identifies a staff or staff group.

**May contain:**

TEXT, 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

**Used by:**

model.labelLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* source, IDREFS, optional

**Module:**

shared

***<language> language***

**Description:**

The name of a language. The language of text elements may be related to this element via its id, which normally takes the form of a code, drawn from a coded list, such as RFC3066 or iso639-2b.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

langusage

**Attributes:**

* analog, TEXT, optional
* authority, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<langusage> language usage***

**Description:**

Langusage groups elements describing the languages, sublanguages, dialects, etc., represented within the encoded work.

**May contain:**

language

**Used by:**

profiledesc, source

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<layer> layer***

**Description:**

An independent stream of events on a staff. The term 'layer' in 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

**Used by:**

model.layerLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* visible, data.BOOLEAN, optional
* when, IDREF, optional

**Module:**

shared

***<layerdef> layer definition***

**Description:**

Container for layer meta-information.

**May contain:**

instrdef

**Used by:**

model.layerdefLike

**Attributes:**

* dur.default, data.DURATION, optional
* grace, data.GRACE, optional
* id, ID, optional
* instr, IDREFS, optional
* n, NMTOKEN, optional
* octave.default, data.OCTAVE, optional
* text.fam, data.FONTFAMILY, optional
* text.name, data.FONTNAME, optional
* text.size, data.NUMBER, optional
* text.style, data.FONTSTYLE, optional
* text.weight, data.FONTWEIGHT, optional
* visible, data.BOOLEAN, optional

**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.

**May contain:**

EMPTY

**Used by:**

model.lbLike

**Attributes:**

* facs, IDREFS, optional
* func, TOKEN, optional
* id, ID, optional
* n, NMTOKEN, optional
* source, IDREFS, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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.

**May contain:**

TEXT, 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, 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

**Used by:**

app

**Attributes:**

* cause, NMTOKEN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* entityref, ENTITY, optional
* expan, IDREFS, optional
* fragment, data.FRAGMENT, optional
* hand, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* resp, IDREFS, optional
* sameas, IDREFS, optional
* seq, data.INTEGERPOSITIVE, optional
* source, IDREFS, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* type, NMTOKEN, optional
* when, IDREF, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**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.

**May contain:**

head, l

**Used by:**

model.lgLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

text

***<ligature> ligature***

**Description:**

The <ligature> element is provided for the encoding of mensural notation where multiple notes are represented by joined symbols.

**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

**Used by:**

model.eventLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* form, data.LIGATUREFORM, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* when, IDREF, optional

**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:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.graphicprimitiveLike

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* endvo, data.VISUALOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* rend, data.LINERENDITION, optional
* sameas, IDREFS, optional
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* startvo, data.VISUALOFFSET, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* type, NMTOKEN, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* x2, data.NUMBER, optional
* y, data.NUMBER, optional
* y2, data.NUMBER, optional

**Module:**

usersymbols

***<list> list***

**Description:**

A formatting element that contains as series of items separated from one another and arranged in a linear, of vertical sequence.

**May contain:**

head, item

**Used by:**

model.listLike

**Attributes:**

* facs, IDREFS, optional
* form, TOKEN, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

text

***<lyrics> lyrics***

**Description:**

The staff attribute gives the staff to which the lyrics are attached. The rhythm of the lyrics will be taken from the notes of that staff. If there is more than 1 layer on that staff, the layer attribute may be used to indicate the layer from which the rhythm should be taken.

**May contain:**

verse

**Used by:**

model.lyricsLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* fontfam, data.FONTFAMILY, optional
* fontname, data.FONTNAME, optional
* fontsize, data.NUMBER, optional
* fontstyle, data.FONTSTYLE, optional
* fontweight, data.FONTWEIGHT, optional
* id, ID, optional
* lang, TEXT, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, required
* synch, IDREFS, optional
* when, IDREF, optional

**Module:**

lyrics

***<marker> marker***

**Description:**

MIDI marker meta-event.

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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. This may be represented by the following markup: <mdiv> <- the opera <mdiv> <- act I <mdiv> <- scene i <mdiv> <- scene ii </mdiv> <mdiv> <- act II <mdiv> <- scene i <mdiv> <- scene ii </mdiv> </mdiv>

**May contain:**

mdiv, parts, score

**Used by:**

model.mdivLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

shared

***<measure> measure***

**Description:**

"In Western notation a vertical line drawn through the staff to mark off metrical units. Hence also the metrical unit thus indicated, which in American usage is called 'measure'. English usage often relies on context alone to make the distinction clear (e.g. 'up to the double bar', 'the end of the bar'), but 'bar-line' is also common." (New Grove) In MEI, the measure element 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

**Used by:**

model.measureLike

**Attributes:**

* barplace, data.BARPLACE, optional
* complete, TOKEN, optional
* control, data.BOOLEAN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* entityref, ENTITY, optional
* facs, IDREFS, optional
* fragment, data.FRAGMENT, optional
* id, ID, optional
* join, IDREF, optional
* left, data.BARRENDITION, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* right, data.BARRENDITION, optional
* sameas, IDREFS, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* taktplace, data.STAFFLOC, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* type, NMTOKEN, optional
* when, IDREF, optional
* width, data.NUMBER, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**Module:**

cmn

***<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:**

EMPTY

**Used by:**

model.startLike

**Attributes:**

* id, ID, optional
* version, meiVersion, optional

**Module:**

shared

***<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.

**May contain:**

altmeiid, encodingdesc, filedesc, profiledesc, revisiondesc

**Used by:**

mei, model.startLike

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* type, TOKEN, optional
* version, meiVersion, optional

**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.

**May contain:**

EMPTY

**Used by:**

model.eventLike, model.staffdefPart

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dot, data.BOOLEAN, optional
* facs, IDREFS, optional
* form, TOKEN, optional
* id, ID, optional
* loc, data.STAFFLOC, optional
* modusmaior, data.MODUSMAIOR, optional
* modusminor, data.MODUSMINOR, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERPOSITIVE, optional
* numbase, data.INTEGERPOSITIVE, optional
* orient, data.ORIENTATION, optional
* prev, IDREFS, optional
* prolatio, data.PROLATIO, optional
* sameas, IDREFS, optional
* sign, data.MENSURATIONSIGN, optional
* size, data.SIZE, optional
* slash, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tempus, data.TEMPUS, optional
* when, IDREF, optional

**Module:**

mensural

***<metatext> meta text***

**Description:**

MIDI text meta-event.

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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

**Used by:**

model.midiLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* when, IDREF, optional

**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

**Used by:**

model.ornamentLike.cmn

**Attributes:**

* accidlower, data.ACCIDENTAL.EXPLICIT, optional
* accidupper, data.ACCIDENTAL.EXPLICIT, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* endid, IDREF, optional
* facs, IDREFS, optional
* form, TOKEN, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* long, data.BOOLEAN, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startid, IDREF, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional

**Module:**

cmnOrnaments

***<mrest> measure rest***

**Description:**

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

**May contain:**

EMPTY

**Used by:**

model.eventLike.measureFilling

**Attributes:**

* altsym, IDREF, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* cutout, TOKEN, optional
* dur.ges, TEXT, optional
* dur.vis, data.DURATION, optional
* facs, IDREFS, optional
* fermata, data.PLACE, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* instr, IDREF, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* size, data.SIZE, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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

**Used by:**

model.eventLike.measureFilling

**Attributes:**

* altsym, IDREF, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* expand, data.BOOLEAN, optional
* facs, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional

**Module:**

cmn

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

**Description:**

An indication that the previous two measures should be repeated.

**May contain:**

EMPTY

**Used by:**

model.eventLike.measureFilling

**Attributes:**

* altsym, IDREF, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* expand, data.BOOLEAN, optional
* facs, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional

**Module:**

cmn

***<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

**Used by:**

model.eventLike.measureFilling

**Attributes:**

* altsym, IDREF, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* cutout, TOKEN, optional
* dur.ges, TEXT, optional
* dur.vis, data.DURATION, optional
* facs, IDREFS, optional
* fermata, data.PLACE, optional
* id, ID, optional
* instr, IDREF, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

cmn

***<multirest> multi-rest***

**Description:**

Multiple measures of rest compressed into a single symbol, frequently found in performer parts.

**May contain:**

EMPTY

**Used by:**

model.eventLike.measureFilling

**Attributes:**

* altsym, IDREF, optional
* block, data.BOOLEAN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur.ges, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* instr, IDREF, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERPOSITIVE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional

**Module:**

cmn

***<multirpt> multi-repeat***

**Description:**

Multiple repeated measures. In modern practice repeats of more than 2 measures should be written out using repeat signs. This element, however, is provided for handling non-standard practices often found in manuscript.

**May contain:**

EMPTY

**Used by:**

model.eventLike.measureFilling

**Attributes:**

* altsym, IDREF, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* expand, data.BOOLEAN, optional
* facs, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERPOSITIVE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional

**Module:**

cmn

***<music> music***

**Description:**

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

**May contain:**

EMPTY

**Used by:**

group, mei, model.startLike

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional
* version, meiVersion, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.nameLike

**Attributes:**

* analog, TEXT, optional
* authority, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* key, NMTOKEN, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* reg, TEXT, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

shared

***<normalization> normalization***

**Description:**

Indicates the extent of normalization or regularization of the original source carried out in converting it to electronic form.

**May contain:**

p

**Used by:**

model.editorialdeclPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* method, TOKEN, optional
* n, NMTOKEN, optional

**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 written note may be 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.

**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

**Used by:**

bend, btrem, chord, ftrem, gliss, model.eventLike

**Attributes:**

* accid, data.ACCIDENTAL.EXPLICIT, optional
* accid.ges, data.ACCIDENTAL.IMPLICIT, optional
* accid.ho, data.NUMBER, optional
* altsym, IDREF, optional
* artic, data.ARTICULATIONS, optional
* artic.ges, data.ARTICULATIONS, optional
* beam, data.BEAMS, optional
* beam.with, data.PLACE, optional
* breaksec, data.INTEGERPOSITIVE, optional
* color, data.COLOR, optional
* coloration, TOKEN, optional
* colored, data.BOOLEAN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* detune, TEXT, optional
* dot.ho, data.VISUALOFFSET, optional
* dot.vo, data.VISUALOFFSET, optional
* dot.x, data.NUMBER, optional
* dot.y, data.NUMBER, optional
* dots, data.AUGMENTDOT, optional
* dur, data.DURATION, optional
* dur.ges, TEXT, optional
* enclose.accid, data.ENCLOSURE, optional
* enclose.note, data.ENCLOSURE, optional
* facs, IDREFS, optional
* fermata, data.PLACE, optional
* gliss, data.GLISSANDO, optional
* grace, data.GRACE, optional
* grace.time, data.PERCENT, optional
* headshape, data.HEADSHAPE, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* instr, IDREF, optional
* layer, data.INTEGERPOSITIVE, optional
* lig, TOKEN, optional
* lv, data.BOOLEAN, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERPOSITIVE, optional
* numbase, data.INTEGERPOSITIVE, optional
* oct, data.OCTAVE, optional
* oct.ges, data.OCTAVE, optional
* pname, data.PITCHNAME, optional
* pname.ges, data.PITCHNAME.GES, optional
* pnum, data.PITCHNUMBER, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* size, data.SIZE, optional
* slur, data.SLURS, optional
* slur.dir, data.SLURDIRECTION, optional
* slur.rend, TOKEN, optional
* staff, data.INTEGERPOSITIVE, optional
* stem.dir, data.STEMDIRECTION, optional
* stem.len, data.NUMBER, optional
* stem.mod, data.STEMMODIFIER, optional
* stem.pos, data.STEMPOSITION, optional
* stem.with, data.PLACE, optional
* stem.x, data.NUMBER, optional
* stem.y, data.NUMBER, optional
* syl, TEXT, optional
* synch, IDREFS, optional
* tab.fret, data.FRETNUMBER, optional
* tab.string, data.STRINGNUMBER, optional
* tie, data.TIE, optional
* tie.dir, data.TIEDIRECTION, optional
* tie.rend, TOKEN, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* tuplet, data.TUPLETS, optional
* visible, data.BOOLEAN, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

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

**Description:**

MIDI note-off event.

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.MIDIVALUE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**Module:**

midi

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

**Description:**

MIDI note-on event.

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.MIDIVALUE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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.

**May contain:**

annot

**Used by:**

filedesc, source

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<num> number***

**Description:**

Numeric information in any form occurring in text.

**May contain:**

TEXT, 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

**Used by:**

model.numLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* unit, TEXT, optional

**Module:**

shared

***<octave> octave***

**Description:**

Octave displacement. (Read, p. 45). 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.

**May contain:**

EMPTY

**Used by:**

model.controleventLike

**Attributes:**

* coll, TOKEN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dis, data.OCTAVE.DIS, required
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, required
* plist, data.PLIST, optional
* prev, IDREFS, optional
* rend, data.LINERENDITION, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

cmn

***<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.

**May contain:**

TEXT, 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

**Used by:**

model.choicePart, model.transcriptionLike

**Attributes:**

* cert, data.CERTAINTY, optional
* evidence, NMTOKEN, optional
* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* resp, IDREFS, optional
* source, IDREFS, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

edittrans

***<ossia> ossa***

**Description:**

Indicates an alternative, usually simpler, version of a measure \*present in the source being transcribed\*. An ossia may be treated as a substitute for the measure, in which case it is rendered on the current staff, or it may be rendered in addition to the measure's contents, in which case 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

**Used by:**

model.ossiaLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* when, IDREF, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.pLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<pad> pad***

**Description:**

An indication of extra visual space between notational elements.

**May contain:**

EMPTY

**Used by:**

model.eventLike

**Attributes:**

* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* num, data.NUMBER, required
* staff, data.INTEGERPOSITIVE, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional

**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

**Used by:**

model.partLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* type, NMTOKEN, optional
* when, IDREF, optional

**Module:**

shared

***<parts> parts***

**Description:**

Gathers performers' parts.

**May contain:**

part

**Used by:**

model.partsLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* type, NMTOKEN, optional
* when, IDREF, optional

**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.

**May contain:**

fw, pgdesc

**Used by:**

model.pbLike

**Attributes:**

* entityref, ENTITY, optional
* facs, IDREFS, optional
* fragment, data.FRAGMENT, optional
* func, TOKEN, optional
* id, ID, optional
* n, NMTOKEN, optional
* source, IDREFS, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**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

**Used by:**

model.controleventLike

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dir, TOKEN, required
* endid, IDREF, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startid, IDREF, optional
* style, TOKEN, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

cmn

***<periodname> period name***

**Description:**

A label that describes a period of time, such as 'Baroque' or '3rd Style period'.

**May contain:**

TEXT, 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

**Used by:**

model.nameLike.label

**Attributes:**

* analog, TEXT, optional
* authority, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* key, NMTOKEN, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* reg, TEXT, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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. May contain name parts in <persname> sub-elements.

**May contain:**

TEXT, 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

**Used by:**

model.nameLike.agent

**Attributes:**

* analog, TEXT, optional
* authority, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* key, NMTOKEN, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* reg, TEXT, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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:**

TEXT, anchoredtext, annot, blockquote, curve, extptr, extref, lg, line, list, p, ptr, ref, symbol, table

**Used by:**

pb

**Attributes:**

* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**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:**

TEXT, 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

**Used by:**

model.metaLike.score

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**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:**

TEXT, 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

**Used by:**

model.metaLike.score

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**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:**

TEXT, 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

**Used by:**

model.metaLike.score

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**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:**

TEXT, 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

**Used by:**

model.metaLike.score

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**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 interchangably (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.

**May contain:**

EMPTY

**Used by:**

model.controleventLike

**Attributes:**

* bezier, NMTOKENS, optional
* bulge, NMTOKENS, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* endvo, data.VISUALOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* join, IDREFS, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* rend, data.CURVERENDITION, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* startvo, data.VISUALOFFSET, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* x2, data.NUMBER, optional
* y, data.NUMBER, optional
* y2, data.NUMBER, optional

**Module:**

shared

***<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.

**May contain:**

condition, dimensions, exhibithist, extent, handlist, inscription, physloc, physmedium, provenance, repository, titlepage, treatmenthist, treatmentsched

**Used by:**

source

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<physloc> physical location***

**Description:**

Location of the source within a repository, e.g., shelf mark or other locational information.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* authority, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<port> port***

**Description:**

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

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.MIDIVALUE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**Module:**

midi

***<price> price***

**Description:**

The cost of access to a bibliographic item.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

availability

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional
* unit, TEXT, optional

**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.

**May contain:**

classification, creation, langusage

**Used by:**

model.headerPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<prog> program***

**Description:**

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

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.MIDIVALUE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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.

**May contain:**

p

**Used by:**

encodingdesc

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

model.eventLike, model.staffdefPart

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERPOSITIVE, required
* numbase, data.INTEGERPOSITIVE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* when, IDREF, optional

**Module:**

mensural

***<provenance> provenance***

**Description:**

The record of ownership or custodianship of an item.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, list, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

EMPTY

**Used by:**

model.ptrLike

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional
* plist, data.PLIST, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* xlink:actuate, TOKEN, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**Module:**

ptrref

***<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.

**May contain:**

address, availability, date, geogname, identifier, respstmt, unpub

**Used by:**

filedesc, source

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<rdg> reading***

**Description:**

Since a reading can be a multi-measure section, the scoredef 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.

**May contain:**

TEXT, 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, 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

**Used by:**

app

**Attributes:**

* cause, NMTOKEN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* entityref, ENTITY, optional
* expan, IDREFS, optional
* fragment, data.FRAGMENT, optional
* hand, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* resp, IDREFS, optional
* sameas, IDREFS, optional
* seq, data.INTEGERPOSITIVE, optional
* source, IDREFS, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* type, NMTOKEN, optional
* when, IDREF, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.locrefLike

**Attributes:**

* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* plist, data.PLIST, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* xlink:actuate, TOKEN, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.choicePart, model.transcriptionLike

**Attributes:**

* cert, data.CERTAINTY, optional
* evidence, NMTOKEN, optional
* id, ID, optional
* n, NMTOKEN, optional
* resp, IDREFS, optional
* source, IDREFS, optional

**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. They may also be called rehearsal figures, or when numbers are used instead of letters, rehearsal numbers. See Read, p. 443. Reh uses a subset of model.textphraseLike.limited. If the entire rehearsal mark is boxed or circled, the enclose attribute is preferred over a rend sub-element.

**May contain:**

TEXT, lb, rend, stack

**Used by:**

model.controleventLike

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* enclose, TOKEN, optional
* facs, IDREFS, optional
* fontfam, data.FONTFAMILY, optional
* fontname, data.FONTNAME, optional
* fontsize, data.NUMBER, optional
* fontstyle, data.FONTSTYLE, optional
* fontweight, data.FONTWEIGHT, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, required
* startid, IDREF, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

cmn

***<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:**

TEXT, 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

**Used by:**

model.rendLike

**Attributes:**

* altrend, TEXT, optional
* color, data.COLOR, optional
* fontfam, data.FONTFAMILY, optional
* fontname, data.FONTNAME, optional
* fontsize, data.NUMBER, optional
* fontstyle, data.FONTSTYLE, optional
* fontweight, data.FONTWEIGHT, optional
* halign, TOKEN, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* rend, data.TEXTRENDITION, optional
* rotation, data.DEGREES, optional
* valign, TOKEN, optional

**Module:**

shared

***<repository> repository***

**Description:**

Institution or agency which holds a bibliographic item. Sub-units of the institution may be marked with nested <repository> elements.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.repositoryLike

**Attributes:**

* analog, TEXT, optional
* authority, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* key, NMTOKEN, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* reg, TEXT, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

shared

***<resp> responsibility***

**Description:**

A phrase describing the nature of a person's intellectual responsibility.

**May contain:**

EMPTY

**Used by:**

respstmt

**Attributes:**

* authority, TEXT, optional

**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.

**May contain:**

corpname, name, persname, resp

**Used by:**

change, editionstmt, seriesstmt, titlestmt, model.pubstmtPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

bend, gliss, model.eventLike

**Attributes:**

* altsym, IDREF, optional
* beam, data.BEAMS, optional
* beam.with, data.PLACE, optional
* color, data.COLOR, optional
* colored, data.BOOLEAN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dot.ho, data.VISUALOFFSET, optional
* dot.vo, data.VISUALOFFSET, optional
* dot.x, data.NUMBER, optional
* dot.y, data.NUMBER, optional
* dots, data.AUGMENTDOT, optional
* dur, data.DURATION, optional
* dur.ges, TEXT, optional
* facs, IDREFS, optional
* fermata, data.PLACE, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* instr, IDREF, optional
* layer, data.INTEGERPOSITIVE, optional
* line, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERPOSITIVE, optional
* numbase, data.INTEGERPOSITIVE, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* size, data.SIZE, optional
* spaces, data.INTEGERPOSITIVE, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* tuplet, data.TUPLET, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.transcriptionLike

**Attributes:**

* desc, TEXT, optional
* facs, IDREFS, optional
* hand, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional
* seq, data.INTEGERPOSITIVE, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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.

**May contain:**

change

**Used by:**

meihead

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

p

**Used by:**

encodingdesc

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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 for text.

**May contain:**

custos

**Used by:**

model.milestoneLike.music

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* rend, TOKEN, optional
* sameas, IDREFS, optional
* source, IDREFS, optional
* synch, IDREFS, optional
* when, IDREF, optional

**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

**Used by:**

model.scoreLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* type, NMTOKEN, optional
* when, IDREF, optional

**Module:**

shared

***<scoredef> score definition***

**Description:**

Container for score meta-information.

**May contain:**

chordtable, instrgrp, keysig, pgfoot1, pgfoot2, pghead1, pghead2, staffgrp, symboltable, timeline

**Used by:**

model.scoredefLike

**Attributes:**

* bar.place, data.BARPLACE, optional
* beam.group, TEXT, optional
* beam.rend, TOKEN, optional
* beam.rests, data.BOOLEAN, optional
* beam.slope, data.NUMBER, optional
* clef.color, data.COLOR, optional
* clef.dis, data.OCTAVE.DIS, optional
* clef.dis.place, data.PLACE, optional
* clef.line, data.CLEFLINE, optional
* clef.shape, data.CLEFSHAPE, optional
* clef.visible, data.BOOLEAN, optional
* dur.default, data.DURATION, optional
* dynam.dist, data.NUMBER, optional
* ending.rend, TOKEN, optional
* grace, data.GRACE, optional
* grid.show, data.BOOLEAN, optional
* harm.dist, data.NUMBER, optional
* id, ID, optional
* key.accid, data.ACCIDENTAL.IMPLICIT, optional
* key.mode, data.MODE, optional
* key.pname, data.PITCHNAME, optional
* key.sig, data.KEYSIGNATURE, optional
* key.sig.mixed, NMTOKEN, optional
* key.sig.show, data.BOOLEAN, optional
* key.sig.showchange, data.BOOLEAN, optional
* lyric.align, data.NUMBER, optional
* lyric.fam, data.FONTFAMILY, optional
* lyric.name, data.FONTNAME, optional
* lyric.size, data.NUMBER, optional
* lyric.style, data.FONTSTYLE, optional
* lyric.weight, data.FONTWEIGHT, optional
* mensur, data.MENSURATIONSIGN, optional
* mensur.dot, data.BOOLEAN, optional
* mensur.form, TOKEN, optional
* mensur.loc, data.INTEGERPOSITIVE, optional
* mensur.orient, data.ORIENTATION, optional
* mensur.size, data.SIZE, optional
* mensur.slash, data.INTEGERPOSITIVE, optional
* meter.count, data.NUMBER, optional
* meter.rend, TOKEN, optional
* meter.sig.showchange, data.BOOLEAN, optional
* meter.sym, data.METERSIGN, optional
* meter.unit, data.NUMBER, optional
* midi.channel, data.MIDICHANNEL, optional
* midi.div, data.INTEGERPOSITIVE, optional
* midi.tempo, data.MIDITEMPO, optional
* mnum.visible, data.BOOLEAN, optional
* modusmaior, data.MODUSMAIOR, optional
* modusminor, data.MODUSMINOR, optional
* multi.number, data.BOOLEAN, optional
* music.name, data.MUSICFONT, optional
* music.size, data.NUMBER, optional
* n, NMTOKEN, optional
* num, data.INTEGERPOSITIVE, optional
* numbase, data.INTEGERPOSITIVE, optional
* octave.default, data.OCTAVE, optional
* ontheline, data.BOOLEAN, optional
* optimize, data.BOOLEAN, optional
* page.botmar, data.NUMBER, optional
* page.height, data.NUMBER, optional
* page.leftmar, data.NUMBER, optional
* page.panels, data.PAGE.PANELS, optional
* page.rightmar, data.NUMBER, optional
* page.scale, data.PGSCALE, optional
* page.topmar, data.NUMBER, optional
* page.units, data.PGUNITS, optional
* page.width, data.NUMBER, optional
* pedal.rend, TOKEN, optional
* prolatio, data.PROLATIO, optional
* proport.num, data.INTEGERPOSITIVE, optional
* proport.numbase, data.INTEGERPOSITIVE, optional
* reh.enclose, TOKEN, optional
* slur.rend, data.CURVERENDITION, optional
* spacing.packexp, data.NUMBER, optional
* spacing.packfact, data.NUMBER, optional
* spacing.staff, data.NUMBER, optional
* spacing.system, TEXT, optional
* system.leftmar, data.NUMBER, optional
* system.rightmar, data.NUMBER, optional
* system.topmar, data.NUMBER, optional
* tempo, data.TEMPOVALUE, optional
* tempus, data.TEMPUS, optional
* text.dist, data.NUMBER, optional
* text.fam, data.FONTFAMILY, optional
* text.name, data.FONTNAME, optional
* text.size, data.NUMBER, optional
* text.style, data.FONTSTYLE, optional
* text.weight, data.FONTWEIGHT, optional
* tie.rend, data.CURVERENDITION, optional
* trans.diat, data.NUMBER, optional
* trans.semi, data.NUMBER, optional
* tune.Hz, data.NUMBER, optional
* tune.pname, data.PITCHNAME, optional
* tune.temper, data.TEMPERAMENT, optional

**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

**Used by:**

model.sectionLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* entityref, ENTITY, optional
* facs, IDREFS, optional
* fragment, data.FRAGMENT, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* restart, data.BOOLEAN, optional
* sameas, IDREFS, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* targettype, NMTOKEN, optional
* title, TEXT, optional
* type, NMTOKEN, optional
* when, IDREF, optional
* xlink:actuate, TOKEN, optional
* xlink:href, data.URI, optional
* xlink:role, ANYURI, optional
* xlink:show, TOKEN, optional

**Module:**

shared

***<segmentation> segmentation***

**Description:**

Describes the principles according to which the musical text has been segmented, for example into movements, sections, etc.

**May contain:**

p

**Used by:**

model.editorialdeclPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<seqnum> sequence number***

**Description:**

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

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERNONNEGATIVE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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.

**May contain:**

identifier, list, respstmt, seriesstmt, title

**Used by:**

filedesc, seriesstmt, source

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.choicePart, model.transcriptionLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

EMPTY

**Used by:**

model.controleventLike

**Attributes:**

* bezier, NMTOKENS, optional
* bulge, NMTOKENS, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* endvo, data.VISUALOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* join, IDREFS, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* rend, data.CURVERENDITION, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* startvo, data.VISUALOFFSET, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* type, NMTOKEN, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* x2, data.NUMBER, optional
* y, data.NUMBER, optional
* y2, data.NUMBER, optional

**Module:**

cmn

***<source> source***

**Description:**

A bibliographic description of a source for the electronic file. Within source, the extent element may be used when only a portion of the source, pages 1-3 for example, are encoded. If extent is absent, then the entire source is presumed to have been encoded. Multiple physdesc sub-elements may be used to describe the physically separate parts of a single source.

**May contain:**

classification, editionstmt, identifier, langusage, notesstmt, physdesc, pubstmt, seriesstmt, titlestmt

**Used by:**

sourcedesc

**Attributes:**

* analog, TEXT, optional
* data, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

filedesc

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

model.eventLike, verse

**Attributes:**

* beam, data.BEAMS, optional
* compressable, data.BOOLEAN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dots, data.AUGMENTDOT, optional
* dur, data.DURATION, optional
* dur.ges, TEXT, optional
* facs, IDREFS, optional
* fermata, data.PLACE, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* tuplet, data.TUPLET, optional
* when, IDREF, optional

**Module:**

shared

***<stack> stacked text***

**Description:**

An inline table with a single column.

**May contain:**

TEXT, 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

**Used by:**

model.rendLike

**Attributes:**

* align, TOKEN, optional
* delim, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**Module:**

shared

***<staff> staff***

**Description:**

The n attribute is a connection back to the appropriate staffdef element. 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, 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

**Used by:**

model.staffLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* visible, data.BOOLEAN, optional
* when, IDREF, optional

**Module:**

shared

***<staffdef> staff definition***

**Description:**

Container for staff meta-information.

**May contain:**

clef, instrdef, keysig, label, layerdef, mensur, proport

**Used by:**

model.staffdefLike

**Attributes:**

* beam.group, TEXT, optional
* beam.rend, TOKEN, optional
* beam.rests, data.BOOLEAN, optional
* beam.slope, data.NUMBER, optional
* clef.color, data.COLOR, optional
* clef.dis, data.OCTAVE.DIS, optional
* clef.dis.place, data.PLACE, optional
* clef.line, data.CLEFLINE, optional
* clef.shape, data.CLEFSHAPE, optional
* clef.visible, data.BOOLEAN, optional
* dur.default, data.DURATION, optional
* dynam.dist, data.NUMBER, optional
* grace, data.GRACE, optional
* grid.show, data.BOOLEAN, optional
* harm.dist, data.NUMBER, optional
* id, ID, optional
* instr, IDREFS, optional
* key.accid, data.ACCIDENTAL.IMPLICIT, optional
* key.mode, data.MODE, optional
* key.pname, data.PITCHNAME, optional
* key.sig, data.KEYSIGNATURE, optional
* key.sig.mixed, NMTOKEN, optional
* key.sig.show, data.BOOLEAN, optional
* key.sig.showchange, data.BOOLEAN, optional
* label.abbr, TEXT, optional
* label.full, TEXT, optional
* layerscheme, data.LAYERSCHEME, optional
* lines, data.INTEGERPOSITIVE, optional
* lines.color, NMTOKENS, optional
* lines.visible, data.BOOLEAN, optional
* lyric.align, data.NUMBER, optional
* lyric.fam, data.FONTFAMILY, optional
* lyric.name, data.FONTNAME, optional
* lyric.size, data.NUMBER, optional
* lyric.style, data.FONTSTYLE, optional
* lyric.weight, data.FONTWEIGHT, optional
* mensur.dot, data.BOOLEAN, optional
* mensur.form, TOKEN, optional
* mensur.loc, data.INTEGERPOSITIVE, optional
* mensur.orient, data.ORIENTATION, optional
* mensur.sign, data.MENSURATIONSIGN, optional
* mensur.size, data.SIZE, optional
* mensur.slash, data.INTEGERPOSITIVE, optional
* meter.count, data.NUMBER, optional
* meter.rend, TOKEN, optional
* meter.sig.showchange, data.BOOLEAN, optional
* meter.sym, data.METERSIGN, optional
* meter.unit, data.NUMBER, optional
* midi.div, data.INTEGERPOSITIVE, optional
* modusmaior, data.MODUSMAIOR, optional
* modusminor, data.MODUSMINOR, optional
* multi.number, data.BOOLEAN, optional
* n, NMTOKEN, optional
* num, data.INTEGERPOSITIVE, optional
* numbase, data.INTEGERPOSITIVE, optional
* octave.default, data.OCTAVE, optional
* ontheline, data.BOOLEAN, optional
* pedal.rend, TOKEN, optional
* prolatio, data.PROLATIO, optional
* proport.num, data.INTEGERPOSITIVE, optional
* proport.numbase, data.INTEGERPOSITIVE, optional
* reh.enclose, TOKEN, optional
* scale, data.NUMBER, optional
* slur.rend, data.CURVERENDITION, optional
* spacing, data.NUMBER, optional
* tab.strings, TOKEN, optional
* tempus, data.TEMPUS, optional
* text.dist, data.NUMBER, optional
* text.fam, data.FONTFAMILY, optional
* text.name, data.FONTNAME, optional
* text.size, data.NUMBER, optional
* text.style, data.FONTSTYLE, optional
* text.weight, data.FONTWEIGHT, optional
* tie.rend, data.CURVERENDITION, optional
* trans.diat, data.NUMBER, optional
* trans.semi, data.NUMBER, optional
* visible, data.BOOLEAN, optional

**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

**Used by:**

model.staffgrpLike

**Attributes:**

* barthru, data.BOOLEAN, optional
* facs, IDREFS, optional
* id, ID, optional
* instr, IDREFS, optional
* label.abbr, TEXT, optional
* label.full, TEXT, optional
* midi.div, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* symbol, TOKEN, optional
* visible, data.BOOLEAN, optional

**Module:**

shared

***<stdvals> standard values***

**Description:**

Specifies the format used when standardized date or number values are supplied.

**May contain:**

p

**Used by:**

model.editorialdeclPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.nameLike.label

**Attributes:**

* analog, TEXT, optional
* authority, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* key, NMTOKEN, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* reg, TEXT, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**Module:**

namesdates

***<subst> substitution***

**Description:**

Groups transcriptional elements when the combination is to be regarded as a single intervention in the text.

**May contain:**

add, corr, damage, del, orig, reg, restore, sic, supplied, unclear

**Used by:**

model.editLike

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.transcriptionLike

**Attributes:**

* agent, TEXT, optional
* cert, data.CERTAINTY, optional
* evidence, NMTOKEN, optional
* facs, IDREFS, optional
* id, ID, optional
* n, NMTOKEN, optional
* reason, TEXT, optional
* resp, IDREFS, optional
* source, IDREFS, optional

**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.

**May contain:**

figdesc, graphic, zone

**Used by:**

facsimile

**Attributes:**

* id, ID, optional
* lrx, data.INTEGERNONNEGATIVE, optional
* lry, data.INTEGERNONNEGATIVE, optional
* n, NMTOKEN, optional
* startid, IDREF, optional
* ulx, data.INTEGERNONNEGATIVE, optional
* uly, data.INTEGERNONNEGATIVE, optional

**Module:**

facsimile

***<syl> syllable***

**Description:**

Individual lyric syllable. Do not confuse this element with the syllable element.

**May contain:**

TEXT, 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

**Used by:**

model.sylLike

**Attributes:**

* con, TOKEN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* fontfam, data.FONTFAMILY, optional
* fontname, data.FONTNAME, optional
* fontsize, data.NUMBER, optional
* fontstyle, data.FONTSTYLE, optional
* fontweight, data.FONTWEIGHT, optional
* halign, TOKEN, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* rend, data.TEXTRENDITION, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* wordpos, TOKEN, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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

**Used by:**

model.syllableLike

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**Module:**

neumes

***<symbol> symbol***

**Description:**

A reference to a previously defined symbol. The starting point, e.g. "hotspot", of the symbol may be indentified 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

**Used by:**

model.graphicprimitiveLike

**Attributes:**

* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* ref, IDREF, required
* sameas, IDREFS, optional
* scale, data.PERCENT, optional
* startid, IDREF, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* type, NMTOKEN, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

usersymbols

***<symboldef> symbol definition***

**Description:**

Declaration of an individual symbol in a symboltable.

**May contain:**

anchoredtext, curve, line, symbol

**Used by:**

symboltable

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**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

**Used by:**

model.symboltableLike

**Attributes:**

* id, ID, optional
* n, NMTOKEN, optional

**Module:**

usersymbols

***<sysreq> system requirements***

**Description:**

System requirements for using the electronic item.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

availability

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<table> table***

**Description:**

Visual layout in tabular form.

**May contain:**

caption, tr

**Used by:**

model.tableLike

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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 <td> attributes control cell spanning.

**May contain:**

TEXT, 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

**Used by:**

tr

**Attributes:**

* colspan, data.INTEGERPOSITIVE, optional
* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* rowspan, data.INTEGERPOSITIVE, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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.

**May contain:**

TEXT, 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

**Used by:**

model.controleventLike, verse

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur.vis, TEXT, optional
* endho, data.VISUALOFFSET, optional
* endto, data.TSTAMPOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* lang, TEXT, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* midi, data.MIDITEMPO, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* value, data.TEMPOVALUE, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

shared

***<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.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, term, title

**Used by:**

keywords, term

**Attributes:**

* analog, TEXT, optional
* classcode, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<th> table header***

**Description:**

Designates a table cell containing column or row heading information as opposed to one containing data. The <td> attributes control cell spanning.

**May contain:**

TEXT, 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

**Used by:**

tr

**Attributes:**

* colspan, data.INTEGERPOSITIVE, optional
* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* rowspan, data.INTEGERPOSITIVE, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

figtable

***<tie> tie***

**Description:**

An indication that two notes of the same pitch form a single note with their combined values. Most often it is rendered as a curved line connecting the two notes. See Read, p. 110-111, 122.

**May contain:**

EMPTY

**Used by:**

model.controleventLike

**Attributes:**

* bezier, NMTOKENS, optional
* bulge, NMTOKENS, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* endvo, data.VISUALOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* rend, data.CURVERENDITION, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* startvo, data.VISUALOFFSET, optional
* subtype, NMTOKEN, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* type, NMTOKEN, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* x2, data.NUMBER, optional
* y, data.NUMBER, optional
* y2, data.NUMBER, optional

**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.

**May contain:**

when

**Used by:**

model.alignLike

**Attributes:**

* id, ID, optional
* mediacontent, data.URI, optional
* medialength, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* origin, IDREF, required
* unit, NMTOKEN, optional

**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

**May contain:**

TEXT, 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

**Used by:**

model.titleLike

**Attributes:**

* authority, TEXT, optional
* facs, IDREFS, optional
* id, ID, optional
* key, NMTOKEN, optional
* lang, TEXT, optional
* level, TOKEN, optional
* n, NMTOKEN, optional
* reg, TEXT, optional
* subtype, NMTOKEN, optional
* type, NMTOKEN, optional

**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.

**May contain:**

blockquote, lb, lg, list, p, pb, table

**Used by:**

model.frontPart

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional

**Module:**

shared

***<titlestmt> title statement***

**Description:**

Container for title and responsibility meta-data.

**May contain:**

respstmt, title

**Used by:**

filedesc, source

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**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.

**May contain:**

td, th

**Used by:**

table

**Attributes:**

* facs, IDREFS, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

figtable

***<treatmenthist> 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.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<treatmentsched> treatment scheduled***

**Description:**

Scheduled treatment, e.g. deacidification, restoration, etc., for an item.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

model.physdescPart

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<trill> trill***

**Description:**

Rapid alternation of two notes a second apart. Usually, the interval is understood to be diatonic unless altered by an accidental. See Read, p. 232-235. 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.

**May contain:**

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

**Used by:**

model.ornamentLike.cmn

**Attributes:**

* accid, data.ACCIDENTAL.EXPLICIT, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dur, data.MEASUREBEAT, optional
* dur.ges, TEXT, optional
* endho, data.VISUALOFFSET, optional
* endid, IDREF, optional
* endto, data.TSTAMPOFFSET, optional
* facs, IDREFS, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startho, data.VISUALOFFSET, optional
* startid, IDREF, optional
* startto, data.TSTAMPOFFSET, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

cmnOrnaments

***<trkname> track name***

**Description:**

MIDI track/sequence name.

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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, i.e., a septuplet may be divided into a group of 3 plus a group of 4 notes. See Read, p. 187-215. The tuplet element may also 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.

**May contain:**

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

**Used by:**

bend, gliss, model.eventLike

**Attributes:**

* bracket.place, data.PLACE, optional
* bracket.visible, data.BOOLEAN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dots, data.AUGMENTDOT, optional
* dur, restriction of list of data.DURATION, optional
* dur.ges, TEXT, optional
* dur.visible, data.BOOLEAN, optional
* facs, IDREFS, optional
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERPOSITIVE, optional
* num.format, TOKEN, optional
* num.place, data.PLACE, optional
* num.visible, data.BOOLEAN, optional
* numbase, data.INTEGERPOSITIVE, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional
* with, data.PLACE, optional

**Module:**

cmn

***<tupletspan> tuplet span***

**Description:**

Alternative element for encoding tuplets, especially useful for those which 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 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

**Used by:**

model.controleventLike

**Attributes:**

* bracket.place, data.PLACE, optional
* bracket.visible, data.BOOLEAN, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* dots, data.AUGMENTDOT, optional
* dur, restriction of list of data.DURATION, optional
* dur.ges, TEXT, optional
* dur.visible, data.BOOLEAN, optional
* endid, IDREF, optional
* facs, IDREFS, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.INTEGERPOSITIVE, optional
* num.format, TOKEN, optional
* num.place, data.PLACE, optional
* num.visible, data.BOOLEAN, optional
* numbase, data.INTEGERPOSITIVE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startid, IDREF, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* when, IDREF, optional
* with, data.PLACE, optional

**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

**Used by:**

model.ornamentLike.cmn

**Attributes:**

* accidlower, data.ACCIDENTAL.EXPLICIT, optional
* accidupper, data.ACCIDENTAL.EXPLICIT, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* delayed, data.BOOLEAN, optional
* facs, IDREFS, optional
* form, TOKEN, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* layer, restriction of list of data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* place, data.PLACE, optional
* plist, data.PLIST, optional
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, restriction of list of data.INTEGERPOSITIVE, required
* startid, IDREF, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

cmnOrnaments

***<unclear> unclear***

**Description:**

Contains musical material which 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.

**May contain:**

TEXT, 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

**Used by:**

model.choicePart, model.transcriptionLike

**Attributes:**

* agent, TEXT, optional
* cert, data.CERTAINTY, optional
* evidence, NMTOKEN, optional
* facs, IDREFS, optional
* hand, IDREF, optional
* id, ID, optional
* n, NMTOKEN, optional
* reason, TEXT, optional
* resp, IDREFS, optional
* source, IDREFS, optional

**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

**Used by:**

model.eventLike.neumes

**Attributes:**

* altsym, IDREF, optional
* color, data.COLOR, optional
* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* form, data.UNEUMEFORM, optional
* hfunc, TEXT, optional
* ho, data.VISUALOFFSET, optional
* id, ID, optional
* inth, TEXT, optional
* intm, TEXT, optional
* layer, data.INTEGERPOSITIVE, optional
* mfunc, TEXT, optional
* n, NMTOKEN, optional
* name, data.UNEUMENAME, optional
* next, IDREFS, optional
* pclass, data.PITCHCLASS, optional
* prev, IDREFS, optional
* psolfa, TEXT, optional
* sameas, IDREFS, optional
* size, data.SIZE, optional
* staff, data.INTEGERPOSITIVE, optional
* subtype, NMTOKEN, optional
* syl, TEXT, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* tstamp.ges, data.INTEGERNONNEGATIVE, optional
* tstamp.real, data.ISOTIME, optional
* type, NMTOKEN, optional
* visible, data.BOOLEAN, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**Module:**

neumes

***<unpub> unpublished***

**Description:**

Used to explicitly indicate that a bibliographic source is unpublished.

**May contain:**

EMPTY

**Used by:**

pubstmt

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<userestrict> usage restrictions***

**Description:**

Container for information about the conditions that affect use of a bibliographic item after access has been granted. May indicate limitations imposed by an owner, repository, or legal statute (for example, copyright law) regarding the reproduction, publication, or quotation of the item. May also indicate the absence of restrictions, such as when rights have been ceded to the public domain. Do not confuse with the <accessdesc> element, which holds information about conditions affecting the availability of the material.

**May contain:**

TEXT, abbr, address, bibl, corpname, date, expan, extptr, extref, fig, geogname, identifier, lb, name, num, periodname, persname, ptr, ref, rend, repository, stack, stylename, title

**Used by:**

availability

**Attributes:**

* analog, TEXT, optional
* id, ID, optional
* n, NMTOKEN, optional

**Module:**

header

***<vel> velocity***

**Description:**

MIDI Note-on/off velocity. The num attribute must be in the range 1-127.

**May contain:**

EMPTY

**Used by:**

midi

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* form, TOKEN, required
* id, ID, optional
* layer, data.INTEGERPOSITIVE, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* num, data.MIDIVALUE, required
* prev, IDREFS, optional
* sameas, IDREFS, optional
* staff, data.INTEGERPOSITIVE, optional
* synch, IDREFS, optional
* tstamp, data.BEAT, optional
* when, IDREF, optional

**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

**Used by:**

model.verseLike

**Attributes:**

* copyof, IDREF, optional
* corresp, IDREFS, optional
* facs, IDREFS, optional
* fontfam, data.FONTFAMILY, optional
* fontname, data.FONTNAME, optional
* fontsize, data.NUMBER, optional
* fontstyle, data.FONTSTYLE, optional
* fontweight, data.FONTWEIGHT, optional
* id, ID, optional
* lang, TEXT, optional
* n, NMTOKEN, optional
* next, IDREFS, optional
* prev, IDREFS, optional
* refrain, data.BOOLEAN, optional
* rhythm, TEXT, optional
* sameas, IDREFS, optional
* synch, IDREFS, optional
* to, data.TSTAMPOFFSET, optional
* vo, data.VISUALOFFSET, optional
* when, IDREF, optional
* x, data.NUMBER, optional
* y, data.NUMBER, optional

**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).

**May contain:**

EMPTY

**Used by:**

timeline

**Attributes:**

* absolute, TEXT, optional
* data, IDREFS, optional
* id, ID, optional
* interval, data.NUMBERPOSITIVE, optional
* n, NMTOKEN, optional
* since, IDREF, optional
* unit, NMTOKEN, optional

**Module:**

linkalign

***<zone> zone***

**Description:**

Defines a rectangular area contained within a surface.

**May contain:**

figdesc, graphic

**Used by:**

surface

**Attributes:**

* id, ID, optional
* lrx, data.INTEGERNONNEGATIVE, optional
* lry, data.INTEGERNONNEGATIVE, optional
* n, NMTOKEN, optional
* ulx, data.INTEGERNONNEGATIVE, optional
* uly, data.INTEGERNONNEGATIVE, optional

**Module:**

facsimile

**MEI Datatypes**

***data.ACCIDENTAL.EXPLICIT***

Description: Accidental attribute values: s = sharp, f = flat, ss = dblsharp, x=dblsharp, ff = dblflat, xs = triple sharp, tb = triple flat, n = natural, nf = naturalflat, ns = naturalsharp. ss indicates the use of 2 sharp signs, while x indicates the use of a single double sharp. nf and ns are used to cancel dbflats and dblsharps, respectively. su = sharp note qtr. tone up, sd = sharp note qtr. tone down, fu = flat note qtr. tone up, fd = flat note qtr. tone down, nu = natural note qtr. tone up, nd = natural note quarter tone down. Quarter-tone accidentals listed in Read, p. 145.

restriction of xs:token

* s
* f
* ss
* x
* ff
* xs
* tb
* n
* nf
* ns
* su
* sd
* fu
* fd
* nu
* nd

***data.ACCIDENTAL.IMPLICIT***

Description: Accidental attribute values: s = sharp, f = flat, ss = dblsharp, x=dblsharp, ff = dblflat, xs = triple sharp, tb = triple flat, n = natural, nf = naturalflat, ns = naturalsharp. ss indicates the use of 2 sharp signs, while x indicates the use of a single double sharp. nf and ns are used to cancel dbflats and dblsharps, respectively. su = sharp note qtr. tone up, sd = sharp note qtr. tone down, fu = flat note qtr. tone up, fd = flat note qtr. tone down, nu = natural note qtr. tone up, nd = natural note quarter tone down. Quarter-tone accidentals listed in Read, p. 145.

restriction of xs:token

* s
* f
* ss
* ff
* n

***data.ARTICULATION***

Description: The following list of articulations mostly corresponds to symbols 1D110-1D111, 1D17B-1D182, 1D185-1D189, 1D1AA-1D1AD, 1D1B3-1D1B5 from the Western Musical Symbols portion of the Unicode Standard, v. 3.1. The dot and stroke values may be used in cases where interpretation is not desirable.

restriction of xs:token

* acc
* stacc
* ten
* stacciss
* marc
* marc-stacc
* acc-marc
* loure
* spicc
* rip
* doit
* plop
* fall
* bend
* flip
* smear
* dnbow
* upbow
* harm
* snap
* fingernail
* damp
* dampall
* open
* stop
* dbltongue
* trpltongue
* heel
* toe
* tap
* pluck
* dot
* stroke

***data.ARTICULATIONS***

Description: One or more values from the list given in the definition of data.ARTICULATION.

list of data.ARTICULATION

***data.AUGMENTDOT***

Description: Dots attribute values (number of augmentation dots) (Read, 113-119, ex. 8-21)

restriction of xs:nonNegativeInteger

* maxInclusive 4

***data.BARPLACE***

Description: Placement of barlines: 'mensur' = between staves only, 'staff' = between and across staves as necessary, 'takt' = short line above staff or through top line. The default value is 'staff'.

restriction of xs:token

* mensur
* staff
* takt

***data.BARRENDITION***

Description: Renderings of barlines

restriction of xs:token

* dashed
* dotted
* dbl
* dbldashed
* dbldotted
* end
* invis
* rptstart
* rptboth
* rptend
* single

***data.BEAM***

Description: Beam attribute values: initial, medial, terminal. Nested beaming is permitted.

restriction of xs:token

* pattern "[i|m|t][1-6]"

***data.BEAMS***

Description: One or more from the list given in the definition of the BEAM entity.

restriction of list of data.BEAM

* minLength 1

***data.BEAT***

Description: A beat location, i.e., [0-9]+(\.?[0-9]\*)? The value must fall between 0 and the numerator of the time signature + 1, where 0 represents the left barline and the upper bound represents the right barline. For example, in 12/8 the value must be in the range from 0 to 13.

restriction of xs:decimal

* minInclusive 0

***data.BEATRPT.REND***

Description: Visual and performance information for a repeated beat symbol.

union of(restriction of xs:positiveInteger, restriction of xs:token)

***data.BEND.AMOUNT***

Description: Either a decimal value or a token. The decimal values are limited to .25, .5, .75, or 1, while the token values are restricted to 'full'.

union of(restriction of xs:decimal, restriction of xs:token)

***data.BOOLEAN***

Description: Boolean attribute values

restriction of xs:token

* true
* false

***data.CERTAINTY***

Description: Values for certainty attribute

restriction of xs:token

* high
* medium
* low
* unknown

***data.CLEFLINE***

Description: Clef line attribute values

data.INTEGERPOSITIVE

***data.CLEFSHAPE***

Description: Clef shape attribute values (Read, p.53-56)

restriction of xs:token

* G
* GG
* F
* C
* perc
* TAB

***data.CLUSTER***

Description: Tone-clusters

restriction of xs:token

* whbox
* blbox

***data.COLOR***

Description: Either a hexadecimal color value, ie., x[0-9A-Fa-f]{6,6} OR a descriptive word, i.e., aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, white, or yellow, for colors defined by the HTML 4.01 specification.

restriction of xs:token

* pattern "(x[0-9A-Fa-f]{6,6}|aqua|black|fuchsia|gray|green|lime|maroon|navy|olive|purple|red|silver|teal|white|yellow)"

***data.CURVERENDITION***

Description: Renderings of curves

restriction of xs:token

* medium
* wide
* dashed
* dotted

***data.DEGREES***

Description: 360th-unit measure of a cirle's circumference; optionally signed decimal number, i.e., [+-]?[0-9]+(\.?[0-9]\*)?

xs:decimal

***data.DURATION***

Description: Logical, that is, written, duration attribute values for the CMN repertoire. Whole note duration = '1'.

restriction of xs:token

* long
* breve
* 1
* 2
* 4
* 8
* 16
* 32
* 64
* 128
* 256
* 512
* 1024
* 2048
* maxima
* longa
* brevis
* semibrevis
* minima
* semiminima
* fusa
* semifusa

***data.ENCLOSURE***

Description: Enclosures for editorial notes and accidentals

restriction of xs:token

* paren
* brack

***data.FINGER.FRET***

Description: In a guitar chord diagram, a label indicating which finger, if any, should be used to play an individual string. The values 'x' and 'o' indicated stopped and open strings, respectively.

union of(restriction of xs:positiveInteger, restriction of xs:token)

***data.FONTFAMILY***

Description: Font family (for text) attribute values. Mup-acceptable values: avantgarde, bookman, courier, helvetica, newcentury, palatino, times.

xs:token

***data.FONTNAME***

Description: Font name (for text) attribute values. Mup-acceptable values: rom, ital, bold, boldital

xs:token

***data.FONTSTYLE***

Description: Font style (for text) attribute values. 'normal' = 'rom' in Mup.

restriction of xs:token

* ital
* normal
* oblique

***data.FONTWEIGHT***

Description: Font weight (for text) attribute values

restriction of xs:token

* bold

***data.FRAGMENT***

Description: Fragment referencing method.

union of(data.XPATH, data.XPOINTER)

***data.FRET***

Description: In a guitar chord diagram, the fret where the finger should be placed. Since guitar chord diagrams are limited to the range of frets that fall under the hand, the value here is also limited. The pos (position) attribute on the chorddef element must be used to indicate at which fret this range begins.

restriction of xs:positiveInteger

* maxInclusive 5
* minInclusive 1

***data.FRETNUMBER***

Description: In string tablature, the fret number, i.e., [1-9]. The value 'o' may be used instead of a numerica value to indicate the open string.

union of(restriction of xs:nonNegativeInteger, restriction of xs:token)

***data.GLISSANDO***

Description: Analytical glissando attribute values: i(nitial), m(edial), t(erminal)

restriction of xs:token

* i
* m
* t

***data.GRACE***

Description: Do grace notes get time from the current (acc) or previous (unacc) one?

restriction of xs:token

* acc
* unacc

***data.HEADSHAPE***

Description: Notehead shapes

restriction of 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

***data.INEUMEFORM***

Description: Interrupted neume forms

restriction of xs:token

* liquescent1
* liquescent2
* tied
* tiedliquescent1
* tiedliquescent2

***data.INEUMENAME***

Description: Interrupted neume, i.e. neume written as 2 or more sub-neumes

restriction of xs:token

* pessubpunctis
* climacus
* scandicus
* bistropha
* tristropha
* pressusminor
* pressusmaior

***data.INTEGERNONNEGATIVE***

Description: Unsigned positive integer values including '0', i.e., [0-9]+

xs:nonNegativeInteger

***data.INTEGERPOSITIVE***

Description: Unsigned positive integer values excluding '0', i.e., 1 to infinity.

xs:positiveInteger

***data.ISODATE***

Description: ISO date formats

union of(xs:date, xs:gYear, xs:gMonth, xs:gDay, xs:gYearMonth, xs:gMonthDay, xs:time, xs:dateTime, restriction of xs:token)

***data.ISOTIME***

Description: ISO 24-hour time format: HH:MM:SS.ss, i.e., [0-9][0-9]:[0-9][0-9]:[0-9][0-9](\.?[0-9]\*)?

xs:time

***data.KEYSIGNATURE***

Description: Key signature may be indicated by a value showing where the key is in the circle of fifths. Mixed key signatures, e.g. those consisting of a mixture of flats and sharps, and key signatures with unorthodox placement of the accidentals (Read, p. 143) must be indicated by setting the key.sig attribute to 'mixed' and providing explicit keysig info in the key.sig.mixed attribute.

restriction of xs:token

* pattern "mixed|0|[1-7][f|s]"

***data.KEYSIGTOKEN***

Description: A token describing the pitch name, inflection, and octave number of an altered pitch in a key signature.

restriction of xs:token

* pattern "[a-g][s|f|ss|x|ff|n|nf|ns|su|sd|fu|fd|nu|nd][0-9]"

***data.LAYERSCHEME***

Description: Indicates how stems should be drawn when more than one layer is present and stem directions are not indicated on the notes/chords themselves. '1' indicates that there is only a single layer on a staff. '2o' means there are two layers with opposing stems. '2f' indicates two 'free' layers; that is, opposing stems will be drawn unless one of the layers has 'space'. In that case, stem direction in the remaining layer will be determined as if there were only one layer. '3o' and '3f' are analogous to '2o' and '2f' with three layers allowed. What about more than 3 layers?

restriction of xs:token

* 1
* 2o
* 2f
* 3o
* 3f

***data.LIGATUREFORM***

Description: Ligature forms

restriction of xs:token

* recta
* obliqua

***data.LINERENDITION***

Description: Renderings of lines

restriction of xs:token

* narrow
* medium
* wide
* dashed
* dotted
* wavy

***data.MEASUREBEAT***

Description: A duration expressed as a count of measures plus a beat location, i.e., [0-9]+m \*\+ \*[0-9]+(\.?[0-9]\*)?, e.g., dur="1m + 3.5" indicates a duration of 1 measure plus 3 and one half beats or, in other words, on the 2nd half of the 3rd beat of the next measure. The measure number must be in the range of 0 to the number of remaining measures and the beat number must be in the range from 0 to the numerator of the time signature plus 1. For example, for an event starting in the first measure of a piece containing 6 measures in 6/8, the measure number must be between 0 to 5 and the beat number must be within the range from 0 to 7, e.g., "4m+3".

restriction of xs:token

* pattern "([0-9]+m \*\+ \*)?[0-9]+(\.?[0-9]\*)?"

***data.MENSURATIONSIGN***

Description: Mensuration attribute values

restriction of xs:token

* C
* O

***data.METERSIGN***

Description: Meter.sym attribute values for CMN notation

restriction of xs:token

* common
* cut

***data.MIDICHANNEL***

Description: MIDI channel numbers

restriction of xs:positiveInteger

* maxInclusive 16

***data.MIDINAMES***

Description: General MIDI instrument names

restriction of 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

***data.MIDITEMPO***

Description: MIDI quarter notes per minute: positive integer in the range 10-1000

restriction of xs:positiveInteger

* maxInclusive 1000
* minInclusive 10

***data.MIDIVALUE***

Description: MIDI values are in the following range

restriction of xs:nonNegativeInteger

* maxInclusive 127

***data.MODE***

Description: Modes

restriction of xs:token

* major
* minor
* dorian
* phrygian
* lydian
* mixolydian
* aeolian
* locrian

***data.MODUSMAIOR***

Description: Maxima-long relationship values.

restriction of xs:positiveInteger

* maxInclusive 3
* minInclusive 2

***data.MODUSMINOR***

Description: Long-breve relationship values.

restriction of xs:positiveInteger

* maxInclusive 3
* minInclusive 2

***data.MUSICFONT***

Description: Music font family

xs:token

***data.NUMBER***

Description: Optionally signed decimal number, i.e., [+-]?[0-9]+(\.?[0-9]\*)?

xs:decimal

***data.NUMBERPOSITIVE***

Description: Unsigned positive decimal values excluding '0', i.e., 1 to infinity.

restriction of xs:decimal

* minInclusive 1

***data.OCTAVE***

Description: Oct attribute values. The default values conform to Acoustical Society of America representation. Read, p. 44.

restriction of xs:nonNegativeInteger

* maxInclusive 9

***data.OCTAVE.DIS***

Description: The amount of octave displacement; that is, '8' (as in '8va' for 1 octave), '15' (for 2 octaves), or rarely '22' (for 3 octaves).

restriction of xs:positiveInteger

* pattern "([\-+]?[0-9]+) & (8|15|22)"

***data.ORIENTATION***

Description: Rotation or reflection of base symbol values.

restriction of xs:token

* pattern "reversed|90CW|90CCW"

***data.PAGE.PANELS***

Description: The number of panels per page.

restriction of xs:positiveInteger

* maxInclusive 2
* minInclusive 1

***data.PERCENT***

Description: Positive decimal number plus '%', i.e., [0-9]+(\.?[0-9]\*)?\%

restriction of xs:token

* pattern "[0-9]+(\.?[0-9]\*)?%"

***data.PGSCALE***

Description: Page scale factor. Page.scale may be expressed as a percentage of a programmatically-determined "usual" size or as a ratio of virtual units to real-world units.

union of(data.PERCENT, data.RATIO)

***data.PGUNITS***

Description: Values for real-world unit attributes

restriction of xs:token

* in
* cm
* mm

***data.PITCHCLASS***

Description: Pclass (pitch class) attribute values

restriction of xs:nonNegativeInteger

* maxInclusive 11

***data.PITCHNAME***

Description: The pitch names (gamut) used within a single octave. The default values conform to Acoustical Society of America representation.

restriction of xs:token

* pattern "[a-g]"

***data.PITCHNAME.GES***

Description: Gestural pitch names need an additional value for when the notated pitch is not to be sounded.

restriction of xs:token

* pattern "[a-g]|none"

***data.PITCHNUMBER***

Description: Pnum (pitch number, e.g. MIDI) attribute values

data.INTEGERNONNEGATIVE

***data.PLACE***

Description: Place, i.e., location of musical material relative to a staff.

restriction of xs:token

* above
* below

***data.PLIST***

Description: Participant list referencing method.

xs:IDREFS

***data.PROLATIO***

Description: Semibreve-minim relationship values.

restriction of xs:positiveInteger

* maxInclusive 3
* minInclusive 2

***data.RATIO***

Description: A ratio, i.e., [0-9]+(\.?[0-9]\*)?:[0-9]+(\.?[0-9]\*)? For example, "40:7.2319"

restriction of xs:token

* pattern "[0-9]+(\.?[0-9]\*)?:[0-9]+(\.?[0-9]\*)?"

***data.SIZE***

Description: Relative size attribute values

restriction of xs:token

* normal
* cue

***data.SLASH***

Description: The number of slashes to be rendered for tremolandi.

restriction of xs:positiveInteger

* maxInclusive 6
* minInclusive 1

***data.SLUR***

Description: i=initial, m=medial, t=terminal. Number is used to match endpoints of the slur when slurs are nested or overlap, e.g. <note slur='i1 i2'/><note slur='t1'/><note slur='t2'/> encodes the fact that two slurs begin on note 1, one which terminates on note 2 and one which terminates on note 3.

restriction of xs:token

* pattern "[i|m|t][1-6]"

***data.SLURDIRECTION***

Description: Slur direction

restriction of xs:token

* up
* down

***data.SLURS***

Description: One or more from the list given in the definition of data.SLUR.

restriction of list of data.SLUR

* minLength 1

***data.STAFFLOC***

Description: Staff location. Staff location includes 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.

data.INTEGERNONNEGATIVE

***data.STEMDIRECTION***

Description: Stem direction

restriction of xs:token

* up
* down

***data.STEMMODIFIER***

Description: Stem modification

restriction of xs:token

* 1slash
* 2slash
* 3slash
* 4slash
* 5slash
* 6slash
* sprech
* z

***data.STEMPOSITION***

Description: Which side of stem?

restriction of xs:token

* left
* right
* center

***data.STRINGNUMBER***

Description: In string tablature, the number of the string to be played, i.e., [1-9]+.

xs:positiveInteger

***data.TEMPERAMENT***

Description: Temperament

restriction of xs:token

* equal
* just
* mean
* pythagorean

***data.TEMPOVALUE***

Description: Beats (meter signature denominator) per minute, e.g. 120.

xs:positiveInteger

***data.TEMPUS***

Description: Breve-semibreve relationship values

restriction of xs:positiveInteger

* maxInclusive 3
* minInclusive 2

***data.TEXTRENDITION***

Description: Text rendition values

restriction of xs:token

* box
* circle
* dblunderline
* none
* quote
* slash
* smcaps
* strike
* sub
* sup
* underline

***data.TIE***

Description: Tie attribute values: initial, medial, terminal

restriction of xs:token

* pattern "[i|m|t]"

***data.TIEDIRECTION***

Description: Tie direction

restriction of xs:token

* up
* down

***data.TIES***

Description: One or more from the list given in the definition of data.TIE.

restriction of list of data.TIE

* minLength 1

***data.TSTAMPOFFSET***

Description: A positive or negative offset from the value given in the tstamp attribute in terms of musical time, i.e., beats[.fractional beat part]

data.NUMBER

***data.TUPLET***

Description: Tuplet attribute values: initial, medial, terminal

restriction of xs:token

* pattern "[i|m|t][1-6]"

***data.TUPLETS***

Description: One or more from the list given in the definition of data.TUPLET.

restriction of list of data.TUPLET

* minLength 1

***data.UNEUMEFORM***

Description: Basic, i.e., single, uninterrupted, neume forms

restriction of xs:token

* liquescent1
* liquescent2
* liquescent3
* quilismatic
* rectangular
* rhombic
* tied

***data.UNEUMENAME***

Description: Basic, i.e., single, uninterrupted, neume names

restriction of xs:token

* punctum
* virga
* pes
* clivis
* torculus
* torculusresupinus
* porrectus
* porrectusflexus
* apostropha
* oriscus
* pressusmaior
* pressusminor
* virgastrata

***data.URI***

Description: a Uniform Resource Identifier, see [RFC2396]

xs:anyURI

***data.VISUALOFFSET***

Description: Visual, i.e. ho and vo, offsets are expressed in terms of staff interline distance; that is, in "stepsizes", which are half the distance between staff lines.

data.NUMBER

***data.XPATH***

Description: xPath expression.

xs:token

***data.XPOINTER***

Description: xPointer expression.

xs:token

***meiVersion***

Description: This version of MEI.

restriction of xs:token

* pattern "1.9b"