Markup Languages for Music

MUSICXML AND MEI
Markup languages in general

SGML: Standardized General Markup Language (US Gov’t Printing Office, 1972)

Music-specific:
- CMME: Computerized Mensural Music Editing
- MusicXML
- MEI: Music Encoding Initiative
CMME: virtual editions of early music

Corpus Mensurabilis Musicarum (zest. 1998)
Est. and built by Theodor Dumitrescu, Oxford-Utrecht-Berkeley

Goal: *One encoding, multiple systems of notation for mensural notation*

From *The Virtual Score*. Used by permission.

[cmme.org](http://cmme.org)
CMME c. 2010

- Content lists,
- Some scores, for 15\textsuperscript{th}-16\textsuperscript{th} cent music
- Java-based
- Core of an electronic publication system
- Peer-reviewed

[http://www.cmme.org]
CMME: Special projects

Support for notational features such as arbitrary proportions and colors

Easily visualize variant readings, both on the score and in a configurable critical apparatus window.
MusicXML: Main Aims

Nexus of all commercial notation interchange schemes

Highest structural compatibility with MuseData and Humdrum

Most useful tool for converting from older to newer versions of *Finale*!

In use for over past decade by many small sw companies and a few music publishers (inc. Hal Leonard)
Part/score versatility in *MusicXML*

**Both/and**

1. Encode **voice by voice** or **bar by bar**
2. Transform **array** as needed

**Part-wise** (*MuseData*)

**Time-wise** (*Humdrum*)
MusicXML: History

Developed from 2000 by Michael Good; 20th anniversary--2020

Distrib Recordare (2002-2011)
- V. 2: Java (2007)
- V. 3: Java (2011)
- Sold as add-on to Finale, Sibelius et al.

Sold to MakeMusic (Finale) in 2011
- Native in Finale; more limited capabilities in Sibelius
  http://www.makemusic.com/musicxml/

Sibelius team moved to Steinberg as Keeping Score > Dorico

https://www.musicxml.com/
MusicXML Progeny

Finale

Sibelius
  - Sibelius
  - Dorico 3.0.1
  - Dorico SE

SMUFL

NoteFlight

MuseScore

Dorico: response to Lead-sheet request
MEI: the Music-Encoding Initiative (4.0)

To support encoding of musical sources
- i.e. sources underpinning modern editions

To function synchronously with TEI (Text Encoding Initiative)
- Sources in which textual material and music are combined

To rely on 3rd-party software for printing and data interchange

https://music-encoding.org/guidelines/v4/content/ (current guidelines)
https://music-encoding.org/community/interest-groups.html (interest groups)
Modeled on the TEI
(used broadly in relation to sources)

Old Roman cursive script

TEI app EpiDoc
-epigraphy (Oxford)

Other TEI tools
-Coins
-Seals

Form of virtual preservation

Tablets from Roman fort at Hadrian’s Wall
Source problems in music manuscripts

Suppressed material
Added material
Imperfections
Ambiguities

Vivaldi MS
Source problems in printed music

Initial for first word? [archaic vs. modern notation]
Bar lines?
Custos?
Part-book problems?

Zefiro: West wind)
Monteverdi