

Music Notation Markup for the Web Ecosystem

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Why Music Markup at all?

- Document persistence and portability
- Dynamic rendering and synthesis
- Analysis, transformation, indexing...

A Bit of History

- Pre-ML: Humdrum, ABC, LilyPond
- Proprietary/Closed: Finale, Sibelius
- App-neutral: MusicXML, MEI
- New music font standard: SMuFL

Music Markup Challenges

- Default rendering decisions based on semantics alone are tricky and hard to codify
- Some human engraving decisions matter
- Ignore human decisions: poor rendering
- Respect them: rigid rendering
- Accommodating and balancing semantic, visual and auditory facets is necessary

Musical Markup Today

- Applications must exchange musical documents in some open format
- It's expensive to build any markup parser/generator, let alone an app
- MusicXML has broad developer support and is relatively mature, but hard to evolve
- MEI has some modern advantages but lacks broad support, chiefly used in academia

Why Do Anything Here?

- We want the Web to encompass, conserve and transform our culture
- Music and its notational systems are part of the world's culture
- The Web is an ecosystem of specs that potentiate each other (think how CSS amplifies HTML, SVG...)
- Today's music notation markup chiefly reflects the concerns of print, though increasingly used online

What might a “Web-oriented” music markup standard allow?

- Styling (both visual and auditory)
- Interactivity
- DOM Manipulation
- Anchors and Pointers
- Accessibility
- Annotation
- Web Fonts

Musical Markup Today

- Applications must exchange musical documents in some open format
- It's expensive to build any markup parser/generator, let alone an app
- MusicXML has broad support in the music dev community and is relatively mature
- MEI is more recent; lower adoption by commercial vendors, chiefly used in academia

A Rough Proposal

- Form a Music Notation W3C Community Group
- Begin work on a new markup language
- Draw on past wisdom from multiple standards
- Eliminate backward-compatibility and IP concerns
- Base on MusicXML vocabulary and concepts to leverage existing technology investments

Summary

- Music markup has evolved largely outside the Web: it's an island now, but doesn't have to be.
- While browsers probably won't natively support notation markup, JS libraries will.
- Cost of rendering technology will shrink; quality and ease of use will grow.
- Let's bring about a new flowering of notated music and music-related apps on the Web