

Recordare



Demonstration: Using MusicXML 2.0 to Create Symbolic Data Sets

Michael Good

Recordare LLC

Los Altos, California, USA

good@recordare.com

Copyright © 2008 Recordare LLC

Outline

- ❖ Issues with using other formats for symbolic music data sets
- ❖ Introduction to MusicXML 2.0
- ❖ Examples of creating your own symbolic data sets from
 - Finale files
 - Sibelius files
 - PDF files created by notation programs

Other Formats for Symbolic Music Data Sets

❖ MIDI

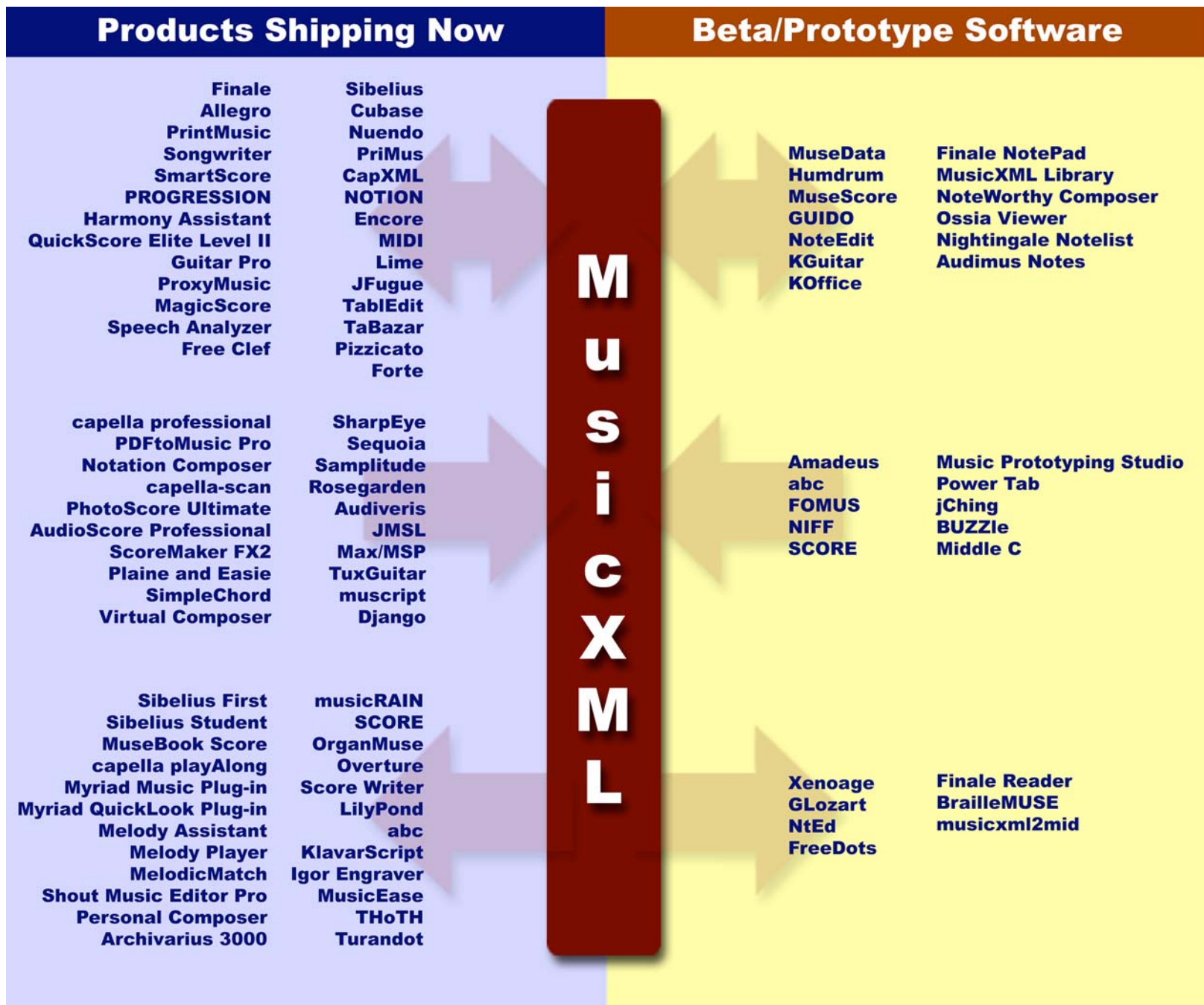
- Lots of files available
- Very little symbolic data present in format

❖ Humdrum and MuseData

- Rich symbolic data
- Humdrum very well suited for harmonic analysis
- Limited ability to represent contemporary pop and jazz
- Limited tools for creating files

What is MusicXML?

- ❖ The first standard computer format for common Western music notation
- ❖ Covers 17th century onwards
- ❖ Available via a royalty-free license
- ❖ Supported by over 100 applications, including Finale, Sibelius, Cubase, and music scanners
- ❖ Useful for music display, performance, retrieval, and analysis applications
- ❖ Based on industry standard XML technology



What's New in MusicXML 2.0

- ❖ Standard compressed zip format (.mxl)
- ❖ A single file can now contain images, audio, bibliographic data, and variants - all linked together
- ❖ W3C XML Schema (XSD) definition for more reliable interchange
- ❖ 95 new features, including music formatting
- ❖ New applications include
 - MelodicMatch for Music IR
 - Free web browser plug-in from Myriad
 - Upcoming Finale NotePad and Finale Reader

Using MusicXML 2.0 for Symbolic Data Sets

- ❖ Represents not just classical music, but contemporary pop and jazz
- ❖ You can create data sets using nearly any music notation program
- ❖ MusicXML-compatible files becoming more widely available (e.g. [Wikifonia](#), [Sheet Music Digital](#), [CPDL](#))
- ❖ MusicXML 2.0 .mxl files are the same size as MIDI files, but contain much more symbolic data

Finale to Sibelius - Orchestral

The image shows a screenshot of the Sibelius 5 software interface. The top menu bar includes File, Edit, View, Notes, Create, Play, Layout, House Style, Plug-ins, Window, and Help. The status bar at the top right shows the system clock as Sun 10:20 PM and battery level at 98%.

The main window is titled "ActorPreludeSample.mus" and displays the score for "Prelude to a Tragedy" by Lars Arner (2003). The score is shown in two views: a full orchestral score on the left and a detailed view of the vocal parts on the right.

The left view shows the full orchestral score with staves for Flute, Oboe, Clarinet, Bassoon, Horn, Trumpet, Trombone, Tuba, Euphonium, Timp, Perc, Violin I, Violin II, Viola, Violoncello, and Contrabass. The right view shows the vocal parts for Soprano, Alto, Tenor, and Bass, along with the Piano accompaniment. The score is in 4/4 time and features a variety of musical notation, including notes, rests, and dynamic markings.

A large blue arrow points from the bottom center of the screenshot towards the bottom right corner of the slide.

Finale to Sibelius - Tablature

The image displays a side-by-side comparison of guitar tablature for the song "West Point". On the left is a screenshot of the Sibelius 5 software interface, showing a handwritten-style score with green and red annotations. On the right is a digital score with standard notation and guitar-specific details like tuning and chord names.

WEST POINT

Tuning D-A-D-G-B-D, Capo 4th fret

Words and Music by JONATHAN BROOKE

8 MAJ7/D# 8 MAJ7

Q#m9 F# C#7sus4 F# C#7sus4 F# C#7sus4

I'M RE - TRA - VEL - LING THIS LIFE - LINE THAT'S SO CLOSE TO HOME WE ARE

ON OUR WAY TO WEST POINT WHERE YOUR PER - FECT, BLOND COU - SIN WILL THROW HIS

HAT IN THE AIR AND WE WILL WATCH IT FALL

© 1995 Dog Dream Music. All rights reserved. Transcription by Ken Temple, Marian Russell, and Michael Good.

West Point

Tuning D-A-D-G-B-D, Capo 4th fret

Words and Music by Jonathan Brooke

Bmaj7/D# Bmaj7

Guitar

5 G#m9 F#C#7sus4 F#C#7sus4 F#C#7sus4

10 I'm re - tra - vel - ling this life - line that's so close to home We are

13 on our way to West Point Where your per - fect, blond cou - sin will throw his

15 hat in the air And we will watch it fall

© 1995 Dog Dream Music. All rights reserved. Transcription by Ken Temple, Marian Russell, and Michael Good.



Sibelius to Finale - From CPDL

The image displays a digital music score for the motet "Ave verum corpus" by Wolfgang Amadeus Mozart. The score is presented in two overlapping windows. The left window shows the full score, including vocal parts (Soprano, Alto, Tenor, Bass) and piano accompaniment. The right window provides a zoomed-in view of the vocal parts, with the lyrics in Latin: "A - ve, a - ve ve - rum cor - pus, na - tum de Ma - ri - a". The score is marked "Adagio" and is in G major, 4/4 time. The copyright notice at the bottom reads: "Copyright © 2006 Philip Ledger, for the Choral Public Domain Library, <http://www.cpdl.org/>. All other rights reserved."



PDF to MusicXML - Pop

The image displays two side-by-side windows of a music application, comparing a PDF version (left) and a MusicXML version (right) of the sheet music for "The Wabash Cannonball".

Left Window (PDF): The interface shows a standard PDF viewer. The sheet music is titled "The Wabash Cannonball" and is marked "Moderately". It includes lyrics and musical notation. The bottom of the window shows the copyright notice "© 2004 Sheet Music Digital".

Right Window (MusicXML): The interface shows a MusicXML viewer. The sheet music is the same as the PDF version, but the notation is rendered in a more modern, clean style. The bottom of the window also shows the copyright notice "© 2004 Sheet Music Digital".

A large blue arrow points from the PDF version to the MusicXML version, indicating the conversion process.

For More Information

- ❖ www.musicxml.org/xml.html
- ❖ Site includes
 - Specification (MusicXML DTD and XSD)
 - Tutorial
 - Example files
 - Links to MusicXML software
 - Publications list at www.musicxml.org/xml/publications.html
- ❖ MusicXML questions?
 - Mailing list signup: www.musicxml.org/lists#MusicXML
 - E-mail to info@recordare.com