Accessible Symbolic Music Representations

David Crombie, Roger Lenoir, Neil McKenzie

Overview

- Introduction
- Accessible Music
- Accessible Design
- Core Experiment within MPEG
- Future Work

Introduction

- There are well established music notations in use by the blind and the visually impaired
- Currently production of accessible music notation takes place through a mixture of manual intervention and small plugins and add-ons to mainstream tools
- Accessibility market represents a growing and interesting market
- Entering this market and incorporating accessibility with mainstream supply chain and production techniques will increase user base and markets.

FNB-Overview

- State subsidised organisation for making information accessible to people with print impairment.
- International Projects department
- Developing software and co-ordinating trans-national projects
- Disseminate project research and outcomes
- Perform field and desk research for FNB and as part of larger projects.

EU Funded Projects

- Harmonica
- Cantate
- Testlab
- Wedelmusic
- Miracle
- TeDub
- Multireader
- Musicnetwork
- iMaestro
- EUAIN

01 european accessible information network

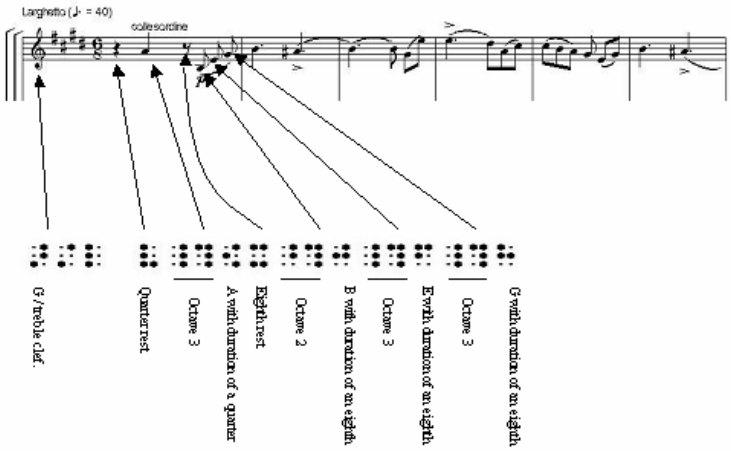
Accessible Music

- Music is a common past time and profession for the visually impaired
- Well established formats for Accessible Music notation - but not altogether up to date with modern technology
- Very fragmented formats for use and tools for use from country to country
- Distribution mechanisms and legislation vary from country to country

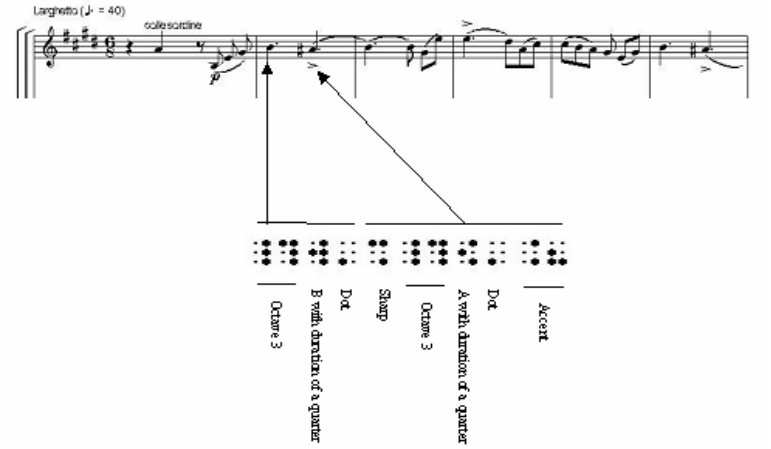
Braille Music

- Linear representation of musical information presented in fragments of Braille Music
- Format in use since 1800's but usage varies depending on country and musical genre
- Music Scores are primarily delivered on printed paper from specialist organisations in each country
- Technologies for producing, consuming and converting Braille Music are starting to become available, but there is a clear need for embracing standards and technologies for ensuring these procedures are included in mainstream music systems.

Braille Music - Graphic

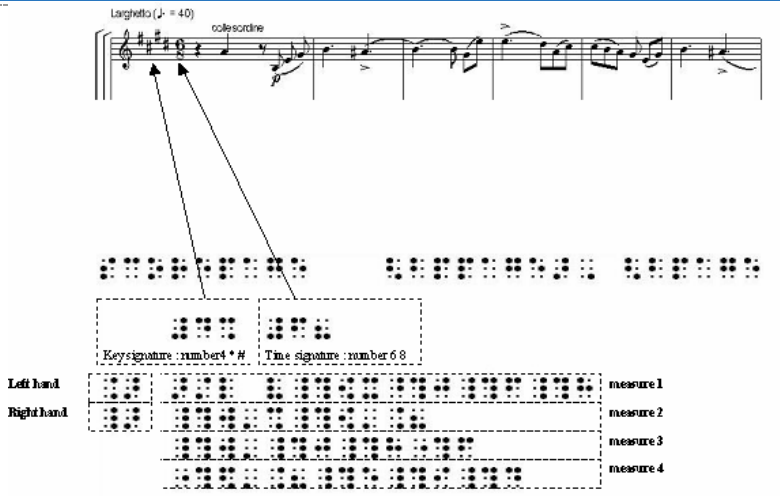


Braille Music - Graphic



01 european accessible information network

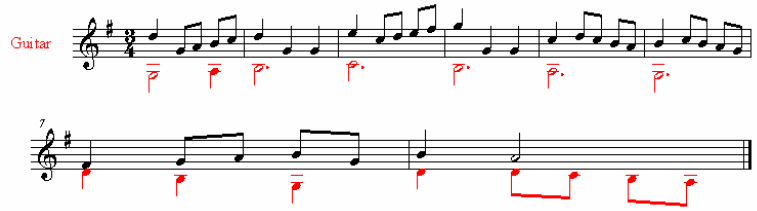
Braille Music - Graphic



Talking Music

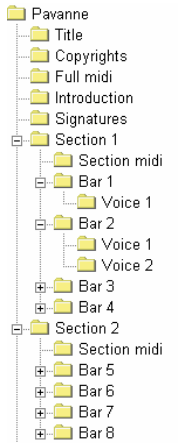
- Designed in The Netherlands to address the lack of availability of Braille Music scores and Braille Music readers and teachers
- Describes the music with words which are recorded in Synthetic speech.
- The “Score” is then delivered to the client in a structured audio daisy book. This is an international standard which is well known to the visually impaired, and allows hierarchical navigation through text information.

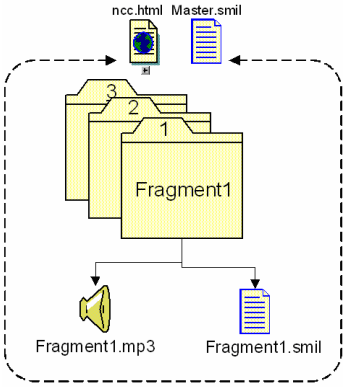
Talking Music - graphic



The title is: Minuet in G. Composer: Bach.
This piece contains 8 bars and consists of 2 sections. The piece is read in eighth notes, except where otherwise indicated.
Key Signature: 1 sharp. Time Signature: 3 fourths time.
Section 1.
Bar 1.
second octave g half.
a quarter.
in agreement with
fourth octave d quarter.
third octave g.
a.
b.
c.

Talking Music as a Daisy book

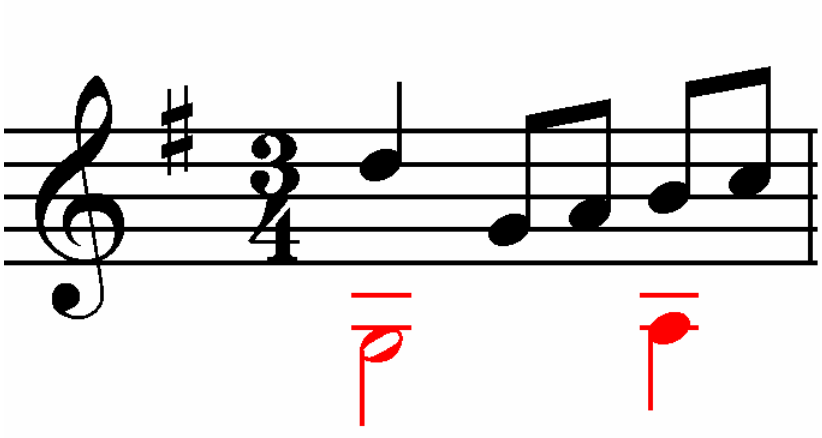




Large Print Music

- For partially sighted users, it is quite common to provide an “enlarged text” version of the music.
- This is in general a far simpler process, but better systems provide options for simplifying the font used, or ensuring that the symbols are not too close together. This removes as much ambiguity in the graphic as possible
- The latest technologies in large print music utilise modern technologies such as scalable vector graphics(SVG), which is an example of one format fits all.

Large Print Music - graphic



Summary

- Provision of accessible music uses traditional and new technologies (SMIL, MPEG, SVG)
- Provision of alternative formats should be available in mainstream environments (plugins for Finale etc)
- Work currently underway on accessible music decoders for MPEG4

Thank you