# MusicXML: the key to accessible music publishing (Presentation transcript) 18 Feb 2025

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## Title slide

Thank you for inviting me to present today. I’m here to talk about a revolution in music publishing—one that’s breaking barriers and opening doors for musicians with print disabilities.

And, I’m going to tell you why we believe that MusicXML is the key to accessible music publishing today, and how you can get involved.

With thanks to our Music Braille Technical Consultant, *Haipeng Hu,* and RNIB’s Braille Technical Officer, *James Bowden*, and RNIB’s Music Officer *Jay Pocknell*, for their expertise which has shaped this agenda.

## Slide 2 – image of musicians

First, I’d like you to picture these scenarios:

* You’re a blind university student studying for a music degree.
* You’re a professional musician losing your sight.
* Or a parent of a blind child with musical talent.
* Or a choir director with a chorus member with low vision.
* Or an organist with dyslexia.

## Slide 3 - Print Disability – image of musicians with caption

These musicians would all be described as having a *print disability*.

So, my question to you as publishers is this: how would you respond to a customer who requests a copy of a score in a format they can read?

## Slide 4 - Print disability

Someone with a print disability is “a person who cannot effectively read print because of a visual, physical, perceptual, developmental, cognitive, or learning disability.” Kerscher, 1989.

For all of these musicians, a standard print or PDF score is useless. They need something more – an accessible format, such as braille, large print, or a screenreader-friendly digital score.

## Slide 5 – MusicXML is the key

This is where MusicXML comes in. It is currently the key to all these formats.

When properly engraved and exported, it transforms music accessibility, empowering publishers to reach more musicians and prove their commitment to inclusion.

This isn’t just innovation—it’s a game-changer. A shift that’s changing lives today and shaping the future of music for those with print disabilities worldwide.

## Slide 6 - A collaborative publishing revolution

A few of the publishers we’re working with us have shared why they’re joining us in this collaborative publishing revolution:

* Schott Music says: “to make significant steps toward creating lasting, industry-wide change for those who require alternative print formats.”
* Hal Leonard said they want: “to establish a more universally accessible printed music format from the outset.”
* Taylor & Francis summarised the mission: “we recognise the importance of making music content fully accessible to ensure that everyone, regardless of ability, can engage with and benefit from it.”

## Slide 7 - The DAISY Consortium

Let me tell you a little about the DAISY Consortium and our role in accessible publishing.

DAISY is an international, non-profit membership organisation, improving access to reading for people with print disabilities.

DAISY leads standards and good practice in accessible digital publications.

And, we work with technology companies and standards agencies on reading and digital publication technologies.

We have a special workstream on accessible music, and we’re working alongside the Royal National Institute of the Blind in the UK.

## Slide 8 - Accessible music formats

For us, ‘accessible music’ is a version of the original score adapted into a format which meets an individual’s reading needs, whilst retaining the integrity of the original music.

For braille readers, this means providing a braille version in their country code and format, either embossed on paper or provided as a digital file to be read on braille devices.

Musicians with low vision use a special format of large print, called Modified Stave Notation, which differs from simply enlarging the score. It adjusts features such as line and note weight, spacing and fonts for better readability, and is often highly customized for each musician’s needs.

Many musicians now use mainstream music notation tools with screen-access technologies to read and create scores through digital braille and speech output, and can even create their own scores with braille input.

## Slide 9 - The score famine

There is a global shortage of accessible scores for musicians with print disabilities, resulting in a ‘score famine’.

Very few scores are available in accessible formats like braille and Modified Stave Notation, making it difficult for musicians to get their hands on the scores they need.

This is due to the time-consuming, skilled and costly process of production, and the limited number of specialists in each country.

Without access to scores, musicians face significant barriers in education, leisure, and professional work, which is addressed by legislation in the USA and EU.

## Slide 10 - Obtaining an accessible score now

Obtaining an accessible music score is often difficult for those with print disabilities.

Print scores and PDFs are unreadable, and accessible versions are scarce.

Libraries for the blind or volunteers may produce Braille or Modified Stave Notation scores, but this requires manual retyping into braille, scanning with OMR, or re-engraving it —a skilled, time-consuming and expensive process which of course, limits availability.

Many online score collections and eBook platforms may seem useful, because they’re digital, but they often lack accessibility for people with print disabilities and have unreliable score quality.

More people are now expecting digital access, including children and adults, so providing accessible digital scores is now essential.

As book publishing has successfully embraced accessibility, the music publishing sector can now follow suit.

## Slide 11 - Sector collaboration

After several years of the DAISY Music Braille Project leading strategic interventions and sector collaboration, we can now advocate for accessible music publishing.

Key advances include:

1. The MusicXML file standard has been Improved and is more comprehensive for accessibility purposes.
2. More music notation tools are usable with screenreaders, and have better MusicXML export.
3. New and improved automated tools exist which reliably convert MusicXML into braille or Modified Stave Notation.
4. DAISY Engraving Guidelines specify how to create structured scores ready for MusicXML export.
5. We have established an Action Group on Accessible Music Publishing (more on this later).

## Slide 12 - The solution: accessible music publishing

So, what solution are we recommending for accessible music publishing?

We are advocating that music publishers firstly create ‘born accessible’ scores in notation tools. This means that they are created with accessibility in mind.

Then, secondly, this quality notation file is exported to a MusicXML file.

## Slide 13 - MusicXML: a flexible format

This exported MusicXML file is a ‘pivot’ or ‘intermediary’ file format.

It’s highly flexible, as it can be opened in a notation tool, read immediately with screen-access technology, converted automatically into braille or Modified Stave Notation, and cab be customized for individual needs.

This is *ground-breaking* - and provides instant access to scores which were previously inaccessible, and means that alternative formats can be produced within a few minutes rather than a few months!

Now, we are only recommending that publishers provide *MusicXML* files for musicians with print disabilities. We are not recommending that publishers try to create and distribute accessible formats like braille or large print themselves. That is too specialist to expect you to be able to do.

## Slide 14 - The process of ‘born accessible’ publishing

So, what would the process look like for publishers committing to born accessible publishing?

1. Engrave a high-quality music notation file using the latest software and DAISY Engraving Guidelines.
2. Export the file to MusicXML (using the latest Dolet plugin for Sibelius).
3. Continue on to print/digital publication, ensuring consistency — always re-export to MusicXML if the score changes.
4. Hold the MusicXML file, and make it available to musicians with print disabilities on request, or via your website.

It’s helpful to include the original notation file or a PDF with the MusicXML for proofreading purposes.

## Slide 15 - Tools

And what tools are involved in all of this?

Well, we have been working closely with the developers of the mainstream notation tools, particularly the free MuseScore Studio, and also with Sibelius and Finale (though Finale has been sunset).

These tools export good MusicXML AND are accessible to blind and low-vision users themselves.

End-users and producers of accessible formats can also use automated converter tools produced by non-profit agencies for the blind, to convert the MusicXML files into braille and Modified Stave Notation.

No automated tool is perfect though – so proofreading and checks are always needed.

We have supported the development of two tools:

Sao Mai Braille (SMB) which is a full braille converter, which handles text, maths, science, tactile graphics - and MusicXML - into braille. Some SMB functionality is also available within MuseScore, together with Modified Stave Notation styles making it a very powerful tool.

And there’s MakeBraille, another automated converter, which specialises in converting MusicXML and scanned print files using Capella, into music braille.

## Slide 16 - What will users do with the MusicXML file?

So, once a musician with a print disability has a MusicXML file from the publisher, what will they do with it?

## Slide 17 - Make music!

Simply put, they will make music!

As I’ve already described, with a MusicXML file they can instantly access the score using notation tools with speech and braille, or use a converter tool to convert them to braille or Modified Stave Notation to suit their particular reading needs.

Having an accessible digital score removes barriers, and enables them to read, learn, explore, perform, and reach their full potential in education, work, and leisure.

## Slide 18 - Get involved

Get involved by joining the **Accessible Music Publishing Action Group (AMPAG),** led by **DAISY and RNIB,** uniting music publishers, engravers, and accessible format producers.

Together, we’re working to ensure sustainable, equitable access to music scores by integrating **born-accessible MusicXML** into publishing workflows.

## Slide 19 - Participants

We have a good range of participants in the Action Group – an increasing number of music publishers (14 so far), an engraving service, and 9 representatives of producers of accessible formats, with quarterly meetings.

## Slide 20 - Areas of collaboration

We are collaborating on several areas of common concern.

Publishers will want to develop and promote their own policy on accessible music publishing and provision. We've developed a **framework publisher policy** covering common issues, with publishers at various stages of preparing their own.

The group is exploring workflows for new publications and exploring remediation methods for back-catalogue scores, ensuring that the digital and print versions remain consistent, with proper quality control.

Publishers are developing their expertise in file creation, though file assessments conducted by our specialist reviewers.

However, we face two challenges:

While sheet music publishers can follow our existing guidelines, the creation and conversion of ***music textbooks* poses a greater challenge**. We need to adapt the processes used in book publishing to accommodate the musical elements.

Another hurdle is **Optical Music Recognition (OMR) –** the current scanning and editing processes are inadequate for the creation of accessible formats.

If you have a development that could help with these challenges, please reach out.

## Slide 21 - The benefits of accessible music publishing

So, to round up, what are the benefits of accessible music publishing?

Well, MusicXML is a flexible, portable format that allows you to create once and publish everywhere, making it a great internal pivot file for publishers, and increasing your customer base in all territories.

It ensures compliance with US and EU legislation, supports equity for customers, and upskills music contributors like composers, engravers and editors, leading to more consistent scores.

Providing MusicXML files simplifies how you handle customer requests, reducing complexity and cost compared to offering multiple formats of braille or Modified Stave Notation.

It’s also low-risk, as only those with print disabilities will need it, and they are used to respecting publishers’ rights of accessible materials.

Finally, publishers can distribute MusicXML files directly to customers or via trusted libraries for the blind for authorized access.

## Slide 22 - Help shape the publishing revolution

So, whatever your interest in accessible music publishing, join us at AMPAG, and help to shape this music publishing revolution! You can start straight away…

You can enhance your engraving skills by adopting the DAISY Engraving Guidelines and identifying differences from your current practices.

We offer file testing and guidance on suitability of your files for accessible formats.

Review your workflow, from commissioning to publication, to see where you could integrate accessible publishing practices.

Start preparing your accessible music publishing policy, using our framework template if needed, and discuss it across your business.

You’ll find more details on our webpage at: daisy.org/accessiblemusicpublishing

And you can email us at musicbraille@daisy.org

We look forward to collaborating with some of you in future.