Securing the future of music braille  
Strategic interventions from the DAISY Music Braille Project to safeguard music braille production and use

# Presentation script – Dr. Sarah Morley Wilkins

## For: Round Table on Information Access for People with Print Disabilities Inc.

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And parts of this script were also used for the joint DAISY-BANA day 10 May 2023, Washington DC.

Captioned video with demos available at:

<https://dl.daisy.org/projects/musicbraille/SMW_Round_Table_DAISY_Music_Braille_Presentation_8.5.2023_FINAL.mp4>

TITLE SLIDE 1

Today I’m going to describe how the ‘DAISY Music Braille Project’ was designed to secure the future of music braille production and use, by delivering a range of strategic interventions, and how they might be relevant to you and your beneficiaries.

What we’ve developed benefits producers and end-users who need to be able to convert, create, explore and output music in hard-copy and digital braille, by improving conversion tools, the standards for file formats, and ways of sharing files and expertise internationally.

I’m Dr Sarah Morley Wilkins, the Project Manager & User Experience Consultant of the DAISY Music Braille Project.

Thank you so much for inviting me to talk about these tools and resources at your conference, and I’m sorry I’m not able to be able to be with you in person - but I do hope we’ll stay in touch.

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I’d like to acknowledge Arne Kyrkjebø from the Norwegian Library of Talking Books and Braille, who initiated and champions this project, and Haipeng Hu, a blind musician and transcriber, who is the project’s Music Braille Technical Consultant

And thanks to all our sector funders from Europe, Australia and North America who made this work possible.

I’m particularly pleased to be presenting to you today, because some years ago when I worked at RNIB, your Round Table inspired me to propose and lead a merger of the three former standards bodies in the UK to form a single ‘UK Association for Accessible Formats’ (UKAAF), which continues today, and which has strong links with DAISY activities.

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Firstly, I’d like to explain a bit about the DAISY Consortium. It’s an international non-profit membership organization, working together to improve access to reading for people with print disabilities. DAISY has been leading standards and good practice in accessible digital publications for over 20 years, and works closely with technology companies and standards agencies to ensure that the reading and publishing technology of tomorrow provides an accessible future for all.

The DAISY Board and DAISY members agreed to focus some efforts to protect music braille, and the sector has kindly collaborated to co-fund this music braille project.

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So, what was the original problem?

Five years ago, the Norwegian Library of Talking Books and Braille started to investigate what changes they would have to make to support their blind musicians with music braille in future. It turned out that many blindness agencies and libraries shared a common concern about the ongoing production and demand for music braille, but were certain they wanted to protect embossed braille in particular.

The problems were that: many countries were facing a decline in transcription and teaching expertise; the tools and file-formats needed improvement to be fully fit for purpose, and there was a lack of opportunity for effective file-sharing. Many of you here will understand these issues all too well.

Through a global sector consultation with a wide range of music braille stakeholders we fully explored the concerns of the time and identified opportunities for improvement, which we published in a detailed 2018 report.

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We identified four main areas of concern – the major pieces of the jigsaw puzzle - which all needed attention, if music braille production and use was going to be safe for the future:

Firstly, input files needed to be as high quality as possible for effective conversion.

Secondly: Conversion and mark-up tools needed to be accurate and reliable, suitable both for transcribers and end-users.

Thirdly: We needed good access to existing files to reduce duplication of effort.

And fourthly: We needed good teaching, learning and promotional resources for teachers and learners.

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Our vision for the project was that “Musicians who read braille enjoy timely and affordable access to increased numbers of accurate music braille scores in hard-copy and digital formats produced by effective and reliable conversion tools.”

We designed several strategic interventions to address each of these areas of concern, with a view to making a lasting change across the sector.

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So, what are the outcomes of our strategic interventions?

After our efforts to improve all pieces of the jigsaw around music braille, here’s what’s changed across the sector as a result, and the tools and resources which are now available.

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The First improvement: is that Conversion tools are now available for professionals and end-users:

We have supported the development of two kinds of tools, which have implemented the requirements we specified based on our sector research: a tool for professionals – MakeBraille; and tools for blind end-users and educators – Sao Mai Music Braille Converter with MuseScore.

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So, let me tell you more about the professional tool for agencies – MakeBraille.  
Agencies who wish to scan and mark up original print scores using Capella (capx files), or who have MusicXML scores, can obtain a MakeBraille licence from the non-profit organization dzb lesen in Germany. This automated online conversion tool applies country-specific conversion rules and returns a braille file ready for embossing or reading on a braille display.

I’ve got a short video lined up which explains a little more about MakeBraille.

SLIDE 10: MAKEBRAILLE demo video - 4 mins, captioned.

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Now I’ll tell you about the tools available for end-users and educators, the Sao Mai Music Braille Converter with MuseScore.

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End-users and educators wanting to convert, explore and write music scores themselves can use the free Sao Mai Music Braille Converter (from the non-profit Sao Mai Centre for the Blind in Vietnam) as a desktop or an online web-based version. It converts MusicXML and MuseScore files automatically according to the users’ settings, giving a braille file to read on a braille display or emboss.

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We’ve also supported developments in MuseScore - the free, open source and mainstream music notation editor – which has improved its accessibility for blind users. Furthermore, MuseScore now uses Sao Mai’s braille conversions to display live music braille while exploring the score, as well as supporting 6-key braille input directly into MuseScore.

I’ve got two videos to play to you now to show you these features in more detail. The first one demonstrates converting scores using the Sao Mai Music Braille Converter, and the second shows how live braille and 6-key braille input works in MuseScore.

SLIDE 14: SMB Converter tool demo video - 6 mins, captioned.

SLIDE 15 – MuseScore notation tool demo video - 7 mins captioned.

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## So, that’s all about the tools. The Second improvement after our strategic interventions is that the music file standard has been improved giving easier conversions into braille:

This has been achieved with three areas of work:

Firstly, the file format standard MusicXML now includes more useful tags for converting music scores into braille, after W3C incorporated our recommendations.

Secondly, Music notation tools have improved their MusicXML export.  
At our recommendations, the MusicXML output from mainstream notation tools such as MuseScore, Sibelius and Finale, are now more complete for effective conversions into music braille.

Thirdly, Engraving guidelines now exist for accessible publishing.  
By following our guidelines when creating scores in mainstream notation tools, music engravers, setters and publishers can easily create accessible master scores (which can be easily converted into music braille). This is the start of the ‘born accessible’ agenda for inclusive music publishing.

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The third improvement: is that we now have greater access to existing music braille files:

Again, this has been achieved with three areas of work:

Firstly, we established a Global ‘Music Braille Production Network’:  
By joining this B2B network, braille libraries, blindness and transcription agencies can source existing scores and commission new productions between each other (under the terms of the Marrakesh Treaty), and share expertise and capacity as needed. The trial network is almost ready to open to all eligible organizations.

Secondly, we now have Guidelines for producing international scores.

Music braille transcribers can follow our sector-agreed guidelines to produce scores suitable for international readership. These harmonize some elements of the presentation of music braille, so that the widest group of end-users can read them (and make it much easier for transcribers to create scores for other countries).

Thirdly, we now have metadata for music braille files agreed.  
Music braille producers and owners of online collections of music braille can now adopt these sector-agreed metadata for their files to permit easier file-sharing, score retrieval, and ingestion into online collections. Developed by NLS and ABC with DAISY, these are already being implemented in several agency libraries and online collections.

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The fourth improvement is that we have better access to teaching and learning resources.

We collated and published a Teaching and learning resources list.

So that Teachers, parents and end-users now have a comprehensive list of online resources to reference to locate the most useful resources for their particular need and situation (whether blind or sighted, whether new to, or experienced in music braille, listed in as many languages as we could find.

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Finally, our fifth improvement is that our niche sector is better connected and supports each other.

We developed an Active stakeholder group of around 150 people in this niche sector, which has been invaluable for connecting cross-sector stakeholders, including transcribers, production managers, technology developers, teachers, end-users and researchers (and more) to develop and share expertise and resources in the project – and hopefully beyond. If you’re not already on the mailing list, do sign up!

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So, What’s next?

Well, the development part of the DAISY Music Braille Project finishes at the end of June, and these tools and resources are ready for adoption and integration into services.

However, the sector has been asking for some ongoing support – as it can be hard to know exactly how to make best use of these tools and resources, and you might not even have heard about them yet.

We’re therefore going to propose an 18-month ‘Implementation Phase’ for the project, to promote the tools and resources, and to support organizations with implementation, together with some new activities, to properly embed music braille solutions across the sector.

We hope that the current sector positivity around this idea will translate into funding support.

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In this proposed Implementation Phase we would work to embed resources into practice with 7 areas of activity:

One, Promoting the tools, and supporting organizations with take-up, so that organizations and end-users around the world are confidently using the tools, resulting in greater access to scores for blind musicians.

Two, Developing the Music Braille Production Network – so that more agencies and producers are connected, sharing scores and expertise, and able to add their scores with recommended metadata to the ABC Global Book Service for easier file sharing.

Three, Developing an Inclusive Publishing agenda in the mainstream music publishing industry – so that more scores are born accessible, giving blind users faster, or even immediate, access to scores.

Four: Collating international practice for music braille production – to contribute to the upcoming revisions of international music braille manuals, making it easier for transcribers to produce resources, and for end-users to know country differences.

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Five: Informing developing file formats and braille displays with requirements for music braille (for example, for the successor to MusicXML, and new braille file formats for braille displays and embossers), so that we can take full advantage of their advances.

Six, Sharing practical methodologies for teaching and learning – so that teachers and learners can be more confident with music braille.

Finally, Seven, maintaining sector collaboration and information sharing through networks – so that anyone involved in music braille technology, production and use can share their knowledge and experiences.

So, if you think that you, or your organization, would be able to contribute to some or all of these activities – perhaps, with expertise and/or with a financial contribution, or you just want to stay connected to the project - please do get in touch.

We’d love to make some new friends on our journey to universal information access.

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So, all I’ve got to do now is to give you the main contact details you’ll need for the project where you’ll find all the details of the tools and resources I’ve described today.

Our web pages are at: daisy.org/music-braille

And you can email us at [musicbraille@daisy.org](mailto:musicbraille@daisy.org)

Thank you so much for listening – do stay in touch.