DAISY Music Braille Project:

Q2 update 2022

Reporting on project activity in Q2: April, May, June 2022

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# Document purpose

This document gives an overview of work conducted by the DAISY Music Braille Project in April, May and June 2022 towards tool development, a music braille production network, metadata for music braille, teaching and learning of music braille, publisher workflow and engraving guidelines, as well as sharing news from around the sector. With acknowledgements to our funders.

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# Executive summary

Q2 activity continues on-track across all project activity streams, summarised here, and described in detail in the body of the report.

Contact us at [musicbraille@daisy.org](mailto:musicbraille@daisy.org) / web page [www.daisy.org/music-braille](http://www.daisy.org/music-braille)

## 1. MakeBraille (professional automated conversion tool)

dzb lesen continues to implement improvements and fixes in MakeBraille (now their project funding has ended), and information about licencing the product is now available from dzb lesen.Contact [makebraille-support@dzblesen.de](mailto:makebraille-support@dzblesen.de)

## 2. SMB with MuseScore (interactive end-user music braille tool)

SMB 22.6.2 was released in June, adding new functionality, and the team has prepared the Musescore development environment ready for integration with MuseScore in Q3. We have approved SMB’s extension request to enable them to continue developing until June 2023. MuseScore published a video on Screen Reader Accessibility in MuseScore 3, and continues to add fixes/accessibility functionality ahead of the launch of MuseScore 4 later in the year.

## 3. Music Braille Production Network

The Network continues to request and share scores, and transcription capacity. The score trial has completed, and feedback from the blind reviewers has been collated and is being reviewed. We hope to identify ways to support users reading scores produced outside their country, and how producers can make their transcriptions more easily usable by international users.

## 4. Metadata for music braille

Proposals for ‘Core’ and ‘Recommended’ fields for music braille files have been proposed by the working group of NLS, ABC, BookShare, ONCE, and DAISY. Sector feedback is due 22 July, and results will be shared in Q3.

## 5. Teaching and learning of music braille

We are proposing that we signpost relevant teaching and learning resources by user type and user need (who are you and what do you need to know), rather than by type of resources which puts the onus on the user to filter and find what’s relevant for them. We are seeking help to put known resources into these user categories.

## 6. Publisher Workflow and engraving guidelines

Our proposals to make ‘born accessible’ music scores (by following our engraving guidelines) were very well received at our recent Round Table on Accessible Music Publishing. Participants included music publishers, engravers/music setters, braille transcribers and end-users. We will be facilitating a working group of music publishers to progress this opportunity together.

## 7. Seeking engravers/music setters

If you have recommendations for Sibelius/MuseScore engravers please let us know – we’d like to build our list of freelancers who can create ‘born accessible’ scores which convert easily into accessible formats.

## 8. Presentations given

Project presentations given at:CTEBVI 62nd Annual Conference; Midterm Executive Meeting of the International Council on English Braille; and ‘The Return of Louis Braille to the Pantheon’.

## 9. News from around the sector

The ICEB midterm Executive Committee meetings had a session dedicated to music braille; we introduce Solveig-Marie Oma, a blind organist working with NLB; research into how churches support blind and visually impaired people; announcing a new project ‘Sound Without Sight’; Golden Chord (UK) retires its braille transcription arm but online catalogue still available; survey about development of a Digital Accessible Musical Interface; and announcing new multiline braille displays from Orbit.

Deadline for your news for inclusion in the Q3 report: 30 September 2022.

## 10. Thanks to our funders

CNIB, DAISY Strategic Development Fund, Friends of dzb lesen, MTM, NLB, Norwegian Association of the Blind, NOTA, ONCE, RNIB, SBS, Vision Australia; as well as in-kind contributions from the agencies undertaking development work: dzb lesen, MuseScore and Sao Mai Centre for the Blind.

The rest of the report describes these areas in more detail.

# 1. Professional music braille conversion tool (MakeBraille)

Lead: Matthias Leopold.

Update from: Hannes Kaden, Head of Production, dzb lesen

**Aim**: At least one improved tool is available for rapid professional, accurate and automated music braille transcription which produces global formats and is linked to a production workflow. Note that this does not remove the need for skilled music braille staff.

## 1.1 Information on License Model

In early June, dzb lesen sent information to institutions about the licensing model for using MakeBraille. The information has primarily been sent to those agencies that have been in involved during the testing and project phase in 2020-2021. We look forward to the feedback and possible collaborations. Other interested agencies may contact dzb lesen at [makebraille-support@dzblesen.de](mailto:makebraille-support@dzblesen.de) in order receive further information.

## 1.2 Development Progress

Since the last report for Q1/2022 progress has been made in the continuous development of the MakeBraille service. Some points are listed below. For a complete list, please see <https://dzblesen.uber.space/projects/hodder/wiki/What's_New_in_MakeBraille>.

* The procedures for indentation (first and subsequent lines for different instruments, vocals, etc.) have been made completely flexible. According to specifications, indentation has been adjusted for some countries. As these specifications can vary between countries, please feel free to contact us if changes are necessary.
* For bar-over-bar, procedures have been established to allow vertical assignment of text indents, chord symbols, etc. above or below. For example, tempo indications, exercise numbers and other things can be written above the notes. As these specifications can also vary between countries, please feel free to contact us if changes are necessary.
* MusicXML sources are automatically checked for content errors and these are pointed out. Notes on missing checks are welcome.
* Duplex creation for brf and pef
* Support for music with scat vocals
* Capella Optimizers give more hints about rhythmic errors (feel free to contact us if additional hints are needed)
* MakeBraille works now more robust with capella files depending on the method/source of their creation
* The date of the last server update is shown on the top right of the main page after logging in at <https://makebraille.dzblesen.de/MakeBraille>

## 1.3 Contact

If there any question to MakeBraille, please feel free to contact dzb lesen at [makebraille-support@dzblesen.de](mailto:makebraille-support@dzblesen.de).

# 2. Interactive end-user music braille tool (SMB with Musescore)

**Aim:** At least one improved interactive music braille user tool is available for blind musicians to independently read, write, convert and explore music in accessible ways, in education, for work and leisure.

## 2.1 SMB developments at Sao Mai Centre for the Blind

Lead: Phúc Hoai Dang

### Q2 developments

On June 2nd, we released SMB 22.6.2 with new features and improvements developed since the last release 22.2.2 from early March 2022. Read the release announcement at: <https://saomaicenter.org/en/news/technology/sao-mai-braille-226-released>

In quarter 2 of 2022, Sao Mai Braille’s development team implemented three main areas:

1. Continued to develop new features and, improve and fix bugs of the SM Music Braille translation engine.
2. Prepared Musescore development environment for the integration of SM Music Braille engine and for the further development of new Braille related features in Musescore.
3. Continued to develop new features for SMB other than the music Braille translation one.

Following are highlights accomplished in quarter 2, 2022:

#### SM Music Braille

* Supported to combine multiple voices as chords whenever they have same length, same slur status and same articulations. Option is also added to turn it on or off.
* Handled cases to remove unnecessary hairpin stop.
* Rewrote algorithm to handle partial in-accord for a measure with multiple hidden rests in different passages.
* Supported fermata barlines: normal, angled, squared, double-angled, double-squared, double-dot, half-curve and with inverted type.
* Improved algorithm to handle more cases of tie, including: ties without start or stop, chord and single-note ties crossing voice or staves, ties for arpeggio, and added two user options to toggle applying L.V. ties.
* Fully supported for both chord interval and voice direction based on different settings, which are included:
  + Custom for specific score: transcribers can specify exactly staves to be treated the direction as going up or down.
  + Instrument settings: transcribers can easily config global settings for different instrument types right in the Instruments.xml setting file. By default: single-part and chamber transcription modes are treated similarly for the interval and voice direction such as: keyboard has right hand down and left hand up. String type is based on its clefs (treble assigned to down and bass assigned to up direction) etc. While, orchestra mode will be all in up direction by default.
  + Third-level interval and voice direction option: is mainly used for future applying to selected range of measures.
* Supported to handle voice numbering in two methods, 1) Re-number all voice in unified order, and 2) Keep using MusicXML voice generated numbers for checking cross translation rules such as cross voice/staff slur and tie.
* Supported voice and staff changing and hand division: at the beginning of score, the staff and hand division will be detected and assigned based on its starting staff. Then, it will be reassigned to other hand if meeting a whole measure changed to other staff.
* Improved the whole system to re-define global and local variables in order to correctly handle translation processing at different levels from staff, part and multiple parts. In old method, global variables were used for single part and applied for multiple parts. Therefore, there are some unintentional translation results for uncommon rules of part of different instrument type.
* Automatically assigned voice number for un-numbered note element. Treated all notes of a chord same as voice number.
* Added one mandatory condition of same accidental together with same octave and same pitch step in order to be applied stem note sign. And supported other new advanced stem note cases: by default, stem note sign is treated as a normal note attached with its most elements, except the following attached elements moved to written notes:
  + No accidental before stem note; being moved to written note if not available.
  + No octave sign before stem note.
  + And signs of bow, stopped, fingering, open-string, harmonic, and thumb-position are moved from stem note to written note if not available.
  + Directions right before stem note on the other voice are also moved to right before written note.
* Supported to apply stem note sign for tuplets.
* Supported to combine hidden voice with only directions with other voice on same staff. And applied offset duration by stem signs for these directions if needed.
* Supported moving pedal signs from different voices to one voice and applying stem signs. The engine will move pedal start and stop signs to one same voice if fixed in note duration. Otherwise, it will keep on same voice of pedal start sign and apply stem sign.
* Supported option to show/hide music parenthesis.
* Rewrote to improve shown and hidden staff management. Now, shown and hidden staves are handled based on different transcription modes (single-part or full score) and the instrument types.
* Added two new measure numbering options: follow print score numbering with and without number indicator.
* Dots 56-14 is used for slur with start and stop on same note.
* Supported complicated tuplet cases with or without start/stop, and/or without both start and stop. Nested tuplets are also supported.
* Improved algorithm to correctly calculate duration, especially for tuplet cases.
* Smaller hidden rests are now combined into bigger hidden rests for both normal and in-tuplet hidden ones.
* Supported option to apply partial in-accord when a whole tuplet in range. If checked, the tuplet should not be separated to apply partial in-accord.
* Supported to translate percussion directions and unpitched note type.
* Supported to translate figured bass in three formats (bar-over-bar, line-over-line and section-by-section) in all three transcription modes (single-part, orchestra and chamber). Added two new options: Show figured bass line and Apply stem sign for figured bass.
* Supported to translate accordion diagram and added option to show/hide accordion diagram.
* Supported to translate Harp diagram in three formats of three transcription modes. Added three options for Harp diagram: 1) Hide the diagram, 2) Show diagram on separate line, and 3) Show in line with notes.
* Supported to handle the translation of octave shift direction in both non-facsimile and facsimile. Added two translation options for facsimile: 1) Marking with both print and real octave signs, 2) Using octave shift texts as 8VA, 8VB, 15MA or 15MB.
* Supported to translate “+” text as stopped technique (dots 126-12) for wind/brass instrument type. The relevant option is also added.
* Supported “+” text and stopped technique as left hand pizzicato for string instrument type. Two relevant options are added.
* Supported to translate PIMA text as plucked fingers. Supported to apply clef octave change for pluck instrument type. Two relevant options are added.

#### SMB’s other new features:

* Table names are now localizable.
* Detected BRF, BRL and PEF Braille page settings when opening and automatically applied that settings for the document instead of using global settings.
* Supported soft hyphenation function.
* PEF file is automatically saved in Unicode.
* Supported BRF and BRL preview modes from SMB Braille rich-text document window.
* Synchronized cursor position between rich-text print and Braille document windows; and between rich-text Braille window and BRF/BRL preview modes.
* Supported to save in Spanish .BRA filetype and added new ascii Braille display tables.
* Supported option to insert number of blank lines after or before header or footer on each Braille page.
* Supported new style rules: keep with next, keep together and avoid widow lines.
* Supported right-to-left languages.
* Supported to read math equations with Mathcat library.
* Successfully compiled SMB 64-bit version, ready for next major release.

### 2.1.2 Plans for Q3 development of SMB

In this coming quarter 3 of 2022, our development team will mainly focus on the integration of SM Music Braille translation component into Musescore in order to firstly provide Braille music export and live Braille translation features. In addition, we will release another major version of SMB, which is fully covered all music Braille translation features for wide usage. We expect to release this version in early August 2022.

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**Newsflash:** We have recently approved a 6-month extension for SMB to extend the development of braille-related features in SMB and with MuseScore, funded from our current budget. This means that SMB development will continue to June 2023, providing a usable and high-quality music braille translation engine as well as braille-related features for MuseScore.

## MuseScore developments

Lead: Peter Jonas

### 2.2.1 Q2 Project-funded improvements

In the sixth project quarter (i.e. the second quarter of 2022), three tasks were completed for the interactive user tool project, including the production of a tutorial video:

* Video: Screen Reader Accessibility in MuseScore 3 (<https://www.youtube.com/watch?v=6bRfouJa6oA>)
* Speech: Horizontal and Vertical frame with text not readable when editing
* MusicXML: Hidden staff info not exported

### 2.2.2 Additional accessibility improvements funded by MuseScore

MuseScore’s internal development team has been concentrating on improving stability in preparation for the release of MuseScore 4 later this year. Fixes have been made in many areas of the program to prevent rare crashes and solve minor regressions that went unnoticed in earlier development cycles. This will improve the experience for all users.

### 2.2.3 Plans for Q3 development of MuseScore

The plan for the next quarter is to provide better contextual cues for blind users during range selection and lyrics editing operations. This will be done through a mixture of improved speech output from screen readers, and by making use of MuseScore’s built-in instrument sounds to play relevant notes as the user interacts with the score. For example, notes could be played as they are added to a range selection, or when any lyrics attached to the note are being edited. These improvements are expected to reach end users in MuseScore 4.1, as MuseScore 4.0 is now under feature-freeze for its upcoming release.

### 2.2.4 Testing

For those looking to test the features implemented so far, a second alpha release of MuseScore 4 should be available before the end of July. Keep an eye on the Announcements Forum over on MuseScore.org (<https://musescore.org/en/forum/4492>)

# 3. Music Braille Production Network

The network continues to request and share scores, and music braille transcription between each other. And we will be discussing improvements together during Q3.

The results of the producers’ score-trial are being reviewed by the participants, who have received comments from the blind reviewers as well as each other’s transcriptions for comparison. We will be meeting again in September to discuss the findings, and try to identify:

1. ways to support users when reading scores produced internationally, and
2. easy ways in which producers could make their music braille (more) usable by international audiences.

The Music Braille Production Network now has a reference page on the DAISY web site, so if you’d like to know more please visit: <https://daisy.org/activities/projects/music-braille/production-network/>

# 4. Metadata for music braille resources

Our sector research clearly highlighted a need to improve the search and retrieval of music braille scores from online collections.

Through discussions with ABC Global Book Service, BookShare, NLS and ONCE, and with particular thanks to the careful work of NLS and ABC, a proposed set of ‘Core’ and ‘Recommended’ metadata fields have been shared for comment in the sector.

Feedback is due by 22 July for analysis, and we will report our findings in Q3.

# 5. Teaching and learning of music braille



We have been working to collect a reference list of all available resources for the teaching and learning of music braille, since many agencies and some technology companies list resources on their websites.

Whilst reviewing these lists, it’s clear that many agencies list materials by the type of resource (e.g. Manuals, Tutorials etc), and we are considering signposting these resources instead by user-type and user-need, to help people locate the specific resources they need from the myriad available. For example:

### *Braille readers*

***B1: I’m a braille reader wanting to learn/use/write music braille***

*e.g. at school, university, leisure, employment, older adult*

***B2: I’m a braille reader wanting to learn a particular instrument***

*e.g. I want mainstream music tutor books transcribed into braille*

*(note: they’re print books for sighted instrumentalists, so not necessarily taught in the order suitable for a music braille reader). Could use real experiences from students/musicians grouped by instrument to give advice.*

***B3: I’m a braille reader who needs to learn music theory***

*e.g. I’m taking exams and need to study for the theory parts.*

***B4: I’m a blind person wanting to learn how to transcribe scores into music braille***

*e.g. blind musician, transcriber, teacher*

### *Sighted people*

***S1: I’m a sighted person wanting an introduction to music braille and how a blind person uses it***

*e.g. classroom assistant, teacher, choir director, parent*

***S2: I’m a sighted person wanting to learn music braille in depth so I can teach it***

*e.g. classroom assistant, music teacher, parent*

***S3: I’m a sighted person wanting to learn how to transcribe scores into music braille***

*e.g. sighted or blind musician, classroom assistant, transcriber, teacher*

If you would like to help to contribute to listing resources into these user-types (or have any comments about this as a proposal), please do get in touch: [musicbraille@daisy.org](mailto:musicbraille@daisy.org).

# 6. Publisher workflow and engraving guidelines

We have had some recent good news regarding our hope to progress ‘born accessible’ music publishing, using our engraving guidelines.

We’ve just hosted a really positive Round Table with several music publishers, engravers/music setters, braille producers and end-users, which we will continue to progress. The presentations and notes from the meeting will be published on our project pages and promoted when they’re available.

After presentations from each sector-representative we had a 60-minute Q&A session, during which enthusiasm was shared for trying to produce accessible source files for the purpose of both: 1) print-impaired musicians having immediate access to scores (e.g. through MuseScore with SMB, or through SMB’s MusicXML Reader); and 2) having a high-quality, well-marked up source file to give to accessible format producers to convert into braille or Modified Stave Notation. This would significantly improve the speed of accessible to greater numbers of scores than ever before.

The publishers at the Round Table expressed interest in forming a working group of all music publishers, to join discussions about the logistics and implications of improving the source files available for accessibility purposes, and the DAISY Music Project has agreed to facilitate this.

If you have any named contacts at publishing houses who might be interested in this working group please let me know: [music-braille@daisy.org](mailto:music-braille@daisy.org).

# 7. Do you know any good MuseScore or Sibelius music setters/engravers?

We’re still looking for other recommendations for engravers/music setters please who use MuseScore or Sibelius to set music scores, who can follow our guidelines to create well-structured master files which when exported into MusicXML can be easily converted into music braille. We have worked with several so far, but we’d love to have others on our list of recommended ‘transcription-friendly’ suppliers who can help agencies as part of their transcription workflows, and take part in our music publishing working group.

If you know any reliable music setters/engravers, please do put us in touch via [musicbraille@daisy.org](mailto:musicbraille@daisy.org).

# 8. Presentations given

Sarah Morley Wilkins shared the DAISY Music Braille Project’s achievements and proposals for the future of music braille at three international conferences during Q2:

* CTEBVI 62nd Annual Conference - HIGHER GROUND, April 7 - April 9, 2022
* Midterm Executive Meeting of the International Council on English Braille, 5-9 June 2022 – (all audio presentations available at <https://live.braillecast.com/content.php>)
* ‘The Return of Louis Braille to the Pantheon, 22 June 2022’, hosted by the L’Institut National des Jeunes Aveugles (INJA), les associations apiDV, Valentin Haüy, Voir Ensemble et la Fédération des Aveugles et Amblyopes de France.

# 9. Related news from around the sector

## 9.1 Music braille presentations at ICEB Midterm Executive Committee

There was a dedicated session to music braille issues at the recent midterm meeting of the Executive Committee (Sunday 5th June to Thursday 9th June 2022). Day 2 included discussions about independent efforts to create new braille codes (Jen Gouldon), digitising hard copy braille music (Katie Rodda), the Music Braille Committee Report (Jordie Howell) and the DAISY Music Braille Project (Sarah Morley Wilkins).

Recordings of Day 2 are at: <https://live.braillecast.com/archives22/day2.mp3>

## 9.2 Introducing Solveig-Marie Oma; helping NLB with music braille activities

From: Solveig-Marie Oma

Solveig is working with NLB to help to build up their music braille offering to Norwegian musicians, and is also helping with the DAISY Music Braille Project. She’s very excited about the future availability of music braille for blind musicians.

Solveig is a Norwegian blind organist who’s just completed her studies in church music at the Arctic University of Norway, and who persevered with her music studies despite a scarcity of materials in music braille. She had to use both old scores from different countries and produce scores herself. Luckily the Norwegian system helped her to pay for equipment like a braille embosser, braille displays etc., but the research was taking a lot of time. Becoming a flexible braille music reader and learning to use computer tools can be hard when there is nearly no one to ask inside the country. It could lead to funny situations though, like bringing a 100-year old piano score to a piano lesson!

She works part time in a church as organist, playing services, funerals and weddings. Being a church musician means cooperating with all kinds of people, and this is something she enjoys. Music can help, comfort or be a celebration in people’s lives.  A challenge for her in this job is to learn all the music quickly enough. She needs more lessons in organ improvisation and the music theory which makes the fundament for it. In October she moves to Germany to marry her fiancé, and she hopes to learn more organ improvisation there. After doing an exchange year in Stuttgart in 2019-2020, it became clear that the teachers in Germany have a very good way of teaching these things which are even more important for blind organists.

 Her experience and interests include working with different styles on the organ, also pop and Norwegian folk music, conducting an international amateur choir and teaching. She also plays the alto saxophone at an amateur level and loves all kinds of creative work, both with music, but also other areas as writing or handicraft. Nothing is better though, than working together with others - she finds most inspiration when playing together.

She will be based in Leipzig after the summer and keep on working to improve the possibilities of visually impaired musicians while working with the German language. What the main focus will be in a year or too is not clear, but she may want to study more to address some challenges appearing during her bachelor’s degree.

## A picture containing text, indoor, person, red Description automatically generated9.3 Hymns and church music for blind and visually impaired people

From Solveig-Marie Oma: [sunroadmary@gmail.com](mailto:sunroadmary@gmail.com)

I work as Church musician in Norway, and we have few good books and other tools for blind and visually impaired persons to learn hymns and other church music. I’m now writing a report describing what is needed and how we can improve what we have. It would be very useful to know what churches in other countries have done to support blind and visually impaired people. If you have information about how the churches in your country do this, please drop me an E-mail at [sunroadmary@gmail.com](mailto:sunroadmary@gmail.com).

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## 9.4 Sound Without Sight

From Jay Pocknell: project lead

‘Sound Without Sight’ is a new platform, currently under development, that aims to support, promote, and connect blind and partially sighted musicians and audio engineers. The project’s website and its user community will collate a knowledge hub to bring together useful information and expertise. We hope to become the go-to directory for resources that support visually impaired access to music making.

Access to notation, including braille music, is one of our key focus areas, so we aim to offer sight-impaired musicians (and the teachers and family members who support them) a solid starting point, and a community from which to learn.

The project Steering Group includes representatives from DAISY, and the DAISY Music Braille Project.

To learn more about the project, get involved, or support, please visit: [https://www.soundwithoutsight.org](https://www.soundwithoutsight.org/), or contribute financially to the project <https://www.gofundme.com/f/sound-without-sight-hub-for-blind-vi-musicians>

## Text Description automatically generated with medium confidence9.5 Golden Chord (UK) retires from transcription

Roger Firman recently announced that he’s retired the transcription side of his business Golden Chord, from the end of June 2022. His online catalogue is still available at <https://www.golden-chord.com/> with an arrangement for hard-copies to be available from Connect Design (UK). We wish Roger all the best, and thank him sincerely for his thoughtful contributions to our project, and for remaining on our Steering Group until the end of the project.

## A picture containing text, clipart Description automatically generated9.6 Research into Accessible Digital Musical Interface

From: Rachel Horrell, University of Plymouth,

I am a PhD student researcher at the University of Plymouth, UK, who is aiming to develop an Accessible Digital Musical Interface that will allow blind musicians to play in an ensemble-setting alongside sighted musicians.

This project aims to use technology to develop an interface that will allow blind or visually impaired musicians to play their instrument in an ensemble setting alongside sighted musicians. The interface will convey the musical directions that the conductor makes, which may indicate a slower/faster tempo, getting louder/quieter, stop/start, cues, articulation, repeating, etc. This interface will use technology such as haptics (vibrations) which will convey the musical directions to the blind musician

For the initial stages of my project, I am gaining information from an online survey, and I would love as many people to fill it out as possible. There is also a chance to be involved in the consultation process and trialling of this project at a later date – anyone interested in this can leave their contact details at the end of the survey.

The survey can be found here: [https://forms.office.com/r/EEW0csxVSH](https://forms.office.com/r/EEW0csxVSH?fbclid=IwAR15uKHP8SM7QTc16xz2aw1XP-AROo1-Sfnp78Nma7EJlBkEw8FpQaZelO4)

## A picture containing text, electronics Description automatically generated9.7 Orbit Research Introduces the Orbit Slate Family of Multi-line Braille Displays

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Description automatically generatedOrbit Research announced the launch of the Orbit Slate™ family of multi-line braille displays on the eve of the Annual Conventions of the American Council of the Blind and the National Federation of the Blind.   The Orbit Slate is the first and only product in the world to provide multiple lines of true real-time refreshable braille in a single, compact, tablet-sized device.  It enables people who are blind or visually impaired to seamlessly and intuitively experience spatially arranged text and information such as tables in real time. The Slate offers Orbit’s unique signage-quality TrueBraille™ cells in two configurations – a model with three rows of forty cells and one with five rows of twenty cells.

The Orbit Slate offers all the features of the revolutionary Orbit Reader 20, including a book reader, editor and the ability to connect to a smartphone or computer via Bluetooth or USB and access all the features of these platforms using popular screen reader programs.  It also includes features for productivity and convenience such as onboard translation to and from braille in over 40 languages, a clock with alarms, a calendar, and a calculator.

Both models feature a high-quality 8-key Perkins-style braille keyboard, a cursor pad and rocker keys for navigation and panning, cursor routing buttons and a full-sized SD-card slot for loading books and files for reading and editing.  When connected to a computer or smartphone, the Orbit Slate leverages the extensive screen-reader ecosystem developed for the Orbit Reader family of braille displays to provide instant access to Windows, Mac OS, iOS, Android, Chrome OS, Fire OS and Linux systems.  Its integration with all popular platforms means that users have countless ways of interacting with their favorite apps and software.

The full text of the press release is available at [News – Orbit Research](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.orbitresearch.com%2Fnews%2F&data=05%7C01%7Cjames.bowden%40RNIB.ORG.UK%7Cc5b5b65440094c51ba9408da5c202f3e%7C5d45337cd19243fcaa5805557c9171bc%7C0%7C0%7C637923590541172954%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=D08KLGfTW0GGBlRos%2FsWyd0s9C%2BVyhoO5fu0lFJCOH4%3D&reserved=0). Please visit [https://www.orbitresearch.com/slate/](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.orbitresearch.com%2Fslate%2F&data=05%7C01%7Cjames.bowden%40RNIB.ORG.UK%7Cc5b5b65440094c51ba9408da5c202f3e%7C5d45337cd19243fcaa5805557c9171bc%7C0%7C0%7C637923590541172954%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=JSIgGwZ6v03nDKCYh5CvPkjRdc6B8m671rcoYETMRLY%3D&reserved=0) for more information and to place orders.

## 9.8 Do you have music braille news to share next time?

I’ll happily collate other news from around the sector and send it out. Our next quarterly update will go out in October 2022, so please send me your news by **Friday 30 September 2022.**

This mailing goes out to around 150 music braille experts worldwide, including transcribers, teachers, composers, end-users and developers, among others. Please send your updates to [musicbraille@daisy.org](mailto:musicbraille@daisy.org)

# 10. With thanks to our funders

We’d like to express our huge thanks to all our funders for supporting the project. We are most grateful for your support and belief in the work we’re doing:

* CNIB
* DAISY Strategic Development Fund
* Friends of dzb lesen
* MTM
* NLB
* Norwegian Association of the Blind
* NOTA
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* Vision Australia

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