# Braille Music Transcription: Innovation in braille music translation Processes and transcription practices to produce more music

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## Abstract

Examining braille music transcription practices.

Over the past fifty years music has been transcribed using a variety of methods. Music transcribers who are fully sighted have transcribed on Perkins Braillers or computer from the printed score. Blind transcribers have worked with an amanuensis to produce a) scores from dictation on the slate and stylus, b) Perkins or computer with braille display output, or c) copied out scores from earlier braille editions and made alterations as necessary.

Braille music translation packages have begun to change the landscape for braille transcription internationally. Suddenly, sighted musicians at universities who know nothing about braille can produce legible braille music with the aid of translation, and blind musicians are able to download scores online to run through a braille music translation package for use in rehearsals. They log into the Vision Australia library catalogue, download the brf file onto their braille notetaker which provides options for using the electronic version, or emboss out a hard copy.

Until fairly recently, Vision Australia only produced braille music manually. That is, a blind transcriber worked with a sighted volunteer who is proficient in print music, and dictated the score. This method is still in place, and the process has been refined over the years with a shorthand terminology that makes the process more efficient. However vision Australia also employs a sighted transcriber who works both manually and electronically. Print music editing software (Sibelius and photoscore) are used to achieve good quality scanned images which convert to print music notation. These are then translated through the Dancing Dots suite of programs to convert to braille music.

This presentation will:

* Outline the manual transcription process and demonstrate the order of signs and shorthand terminology used to speed up transcription;
* Discuss the importance of the braille using proofreader and quality checking in the transcription process when working from electronically translated scores;
* Explore semi-automated transcription processes used by Vision Australia as we implement braille translation packages into our work and produce more music for our clients.

## Vision Australia’s Transcription Service

Vision Australia employs three braille music transcribers who are blind, and one transcriber who is sighted. The sighted transcriber works in direct braille in 6-key entry using the Duxbury Braille Translator, reading from a hard copy printed score. This work is proofread by another transcriber so that staff are not regularly proofreading their own work which could lead to inadvertent errors. The blind transcribers work with music proficient sighted volunteers who often have no knowledge of the braille music code. They are trained to dictate music which will be outlined and demonstrated later. We accept volunteers who are at least of 5th grade theory standard so that signs and symbol names are automatic and well-practiced, and that they are familiar with many formats of music. Volunteers have often come from careers such as music teachers, orchestral players, music conductors or even music examiners.

## The Manual Transcription Process

Transcribers work closely with a reader to braille music scores. The volunteer copyholder is given the printed score to work from while the blind transcribers work in the Duxbury Braille Translator with braille display output using direct braille. The reader is taught to read in a set order using specific language, and to read as they see notes on the page. Before commencing, they discuss which part is to be brailled and how the piece is to be tackled, be it piano score, single line, vocal, or orchestral score. For the purposes of this paper I will discuss piano and vocal formats.

The way we now dictate and the terminology used was introduced when blind musicians were brailling with a frame and stylus, therefore the economy of space on a page was paramount. One of our transcribers described working in the 1950s with volunteers who originally came from England. Once a week she would take music to these two ladies who would dictate piano scores to assist her in her teaching work in schools. Over the years, she and other transcribers both blind and sighted refined the terminology used to a) save the reader’s voice and b) make brailling more efficient.

We begin every transcription with the title information, composer, composer’s dates then the key and time signature. There is always a discussion between transcriber and copyholder about the format of the piece and the most user-friendly way to present the score according to the needs of the client who is requesting, and the purpose for which it is being transcribed.

## Vocal music

The format of braille vocal music format is followed. That is, a line of words is brailled, ending close to the end of the braille line and after a punctuation mark if present. For text in a language other than English, the words are spelt out, and in place of a space, the reader taps with a pencil to indicate a new word. The music line is then brailled below the lyric line. Octave signs are dictated in ordinal numbers e.g. fourth for fourth octave, notes are abbreviated, e.g. crotch for crotchet, min for minim, sem for semibreve or semiquaver, and quavers are read out as notes with no value. Articulation is shortened, e.g. stac for staccato, ten for tenuto, short grace for acciaccatura, trip for triplet.

## Piano music

Before we begin to transcribe a piano piece, the reader is asked to work through the score to find all the bar repeats that may be present which saves a lot of time later on. They must ensure that repeat references do not relate to a bar that already repeats an earlier bar, thus creating a circular reference. The copyholder uses a pencil to mark in their repeat bars, doublings and any other information they may want to provide at a given time. At the end of a session, the copyholder writes “read to here” or “proofed” and dates their work so that the next copyholder has a starting point and some idea of what has occurred in the previous session to maintain continuity.

Again, we dictate in the order of signs as they are seen on the page and correct in terms of braille music rules. The order is as follows: dynamic, phrasing, articulation, octave sign, note, fingering, interval. We abbreviate a piano c semibreve chord played with the right hand with fingers 1, 3 and 5 as follows:

Righthand, p, open phrase, fourth g sem 5 with its third 3 and its fifth 1.

I will present two samples of reading to demonstrate manual transcription.

(example 1: webinar). This was conducted by Vision Australia staff in 2019 working at a fairly basic level. They are working on a vocal score to introduce the concept of music dictation to interested sighted musicians.

(Example 2: audio). An experienced Vision Australia copyholder dictating a piano score at a more advanced level, abbreviating the language for a quicker result.

Dictating Music is a booklet written by Roma Dix which steps out how to teach a sighted person how to dictate in straightforward language. It includes examples to practice and works through a variety of music formats. This is available in PDF.

## Electronically translated music

Vision Australia has made substantial headway with its electronic braille music translation. We use the Goodfeel Translation Suite of products in combination with several off-the-shelf music software packages.

* Photoscore converts printed music to music xml;
* Files are imported into Sibelius for error checking. Our sighted transcriber edits the Sibelius score to the best of her ability, eradicating errors and fixing bars with extra signs that have not translated;
* Music xml files are imported into Lime;
* The Lime files are converted into braille using Goodfeel;
* The braille file is given to our transcribers for correcting, adding extra information and formatting.

Photoscore is included with Sibelius and converts scanned music images into music xml.

The Goodfeel Suite of Packages consist of three programs: Sharpeye (a music scanning program that creates an image of a music file. Lime, a print music editor that can import NIF, MIDI or XML files to create print music files that can be edited by both blind and sighted users, and Goodfeel, the braille music translator that converts Lime files to braille.

(Example 3, webinar) shows our transcriber editing a file in Sibelius, importing into Lime and then translating the file with Goodfeel.

The translated file is then allocated to the blind transcribers who manipulate the braille file using Duxbury. Fingering and pedaling are added at this point, repeat bars are scanned for and inserted, and extra instructions that have not come across in the translation are manually added. In accords are corrected if they have not translated. Notes are mostly accurate which means there are no note errors if a transcriber mishears a note read out by an amanuensis. Formatting and pagination are corrected and aligned to Australian standards.

Electronic translation at Vision Australia is used primarily for piano and instrumental music from intermediate to advanced. Complex scores that use standard music notation can be scanned quickly and save time at the transcription stage. Elementary music is more time efficient to braille manually with a good reader particularly when there are lots of fingering and repeats present.

Vocal music is a challenge to automate in terms of formatting. If there is an existing music XML file of a given piece, e.g. 17th century masses available on CPDL, we will use this as a basis for our transcription. After translation with Goodfeel, significant editing with be needed to factor in word repeats, appropriate line breaks, slurred passages, bar numbering in Australian formatting, and adding in music instructions.

## The Importance of the Braille Music Proofreader

Although braille music translation software has meant much more music in the Vision Australia catalogue, we consider the proofreading step essential for a well-presented score when it has been transcribed electronically. Manual transcription allows a score to be customised if a client has made a specific request, e.g. young musicians often prefer less repeat bars which involve complex hand movements and flicking back pages in a score. For study purposes e.g. harmonic analysis, full in-accords may be preferred to part-bar in-accords for a Bach Fugue.

## Conclusion

Technology has meant significant development in our transcription processes in the last few years. We are still learning to integrate electronic translation into our workflow and producing more music from xml files as well as scanning clear hard copy print and pdf sources. The formats we have experimented with are piano music, vocal works and orchestral scores. Our findings are that the automated process runs more smoothly when brailling piano music or single-line instrumental music. Vocal works require significant formatting in the braille editing stage. Vision Australia employs experienced music transcribers and it is therefore time efficient to work manually when brailling straightforward vocal scores. Computer-generated scores come into their own however when working with piano music or orchestral scores. Although musical instructions and fingering etc must be added and repeat bars found, the notes are accurate and therefore after one run-through with a sighted copyholder, there is no need to proofread. Our volunteers are an integral part of the Vision Australia transcription service. They assist both with scanning music for translation, but most notably in the dictation process. An experienced reader is an invaluable resource to a blind transcriber. Although they do not know braille music, they will work through a score quickly and understand how it should be transcribed in a braille-user-friendly way. The terminology and abbreviations used has been refined over many years: transcribers have suggested modifications to shortcut the reading process, and this is something we would like to publicise to other transcribers internationally. Many volunteers have worked with us for many years and have shared interests as we have worked in the same field. They have become special friends as we work together to produce more music in the best possible way for our clients.

# Websites Referenced

Dictating Music R. Dix: <http://iceb.org/music.html>

Dancing Dots: <https://www.avid.com/sibelius>

Photoscore: <https://www.neuratron.com/photoscore.htm>

Sibelius: <https://www.avid.com/sibelius>