The Canadian Music Centre and the Digital Delivery of Scores

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This article describes the work of the Canadian Music Centre (CMC) with respect to the digitization of music scores. It is intended as a follow-up to my post of March 15, 2005, to the CANMUS listserv. Streamed audio has certainly made a big impact as subscriptions to the Naxos Music Library and Classical Music Library have become commonplace in institutional settings. Will we now see a similar movement in printed music? Or are digital scores destined to serve only a niche market? The time seems ripe for CAML librarians to have an ongoing dialogue about this issue.

Digitally-delivered sheet music has grown in recent years. Large commercial distribution companies such as Sheet Music Now and Sheet Music Direct offer downloadable music, as do smaller independent Canadian publishers like Doberman-Yppan. Some are simply downloads of copyright-free scores with no restrictions on printing. Others have extensive catalogues and are sophisticated, with software required to view, download and print.[1]

For its part, the CMC has been involved in a digitization project since 1998, and it now has a large "digital archive" of scores. This spring, the CMC will be running its first digital print-on-demand pilot project. It has raised a number of questions regarding the distribution of scores and their potential future distribution.

Background

From its inception in 1959, the CMC has been a library, publisher and archive. It has acted as a distribution centre for unpublished Canadian music, supporting reproduction and in-house print-and-bind capabilities at both the National Office in Toronto and at a smaller operation in Montréal supporting Québec composers. Distribution of unpublished music is intended to act as a complement to the music publishing industry in Canada. A large archive of paper master-scores has been maintained to support the acquisition and distribution of works. Thus the movement to a digital collection was seen as a natural evolution.

The Digital Music Library

The "Digital Music Library" was conceived in 1998 with the idea that the entire collection of approximately 14,000 scores (as the collection stood then) could be digitized. Start-up funding was secured that year through the Canada Council for the Arts and other partners. Initially, the Library's only product was to be the digitized scores without provision for further patron access. But it was also clear from the outset that the Digital

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[1] For instance, Sheet Music Direct uses the Scorch application, a browser plug-in that works with Sibelius software. It allows for a host of options after the work has been purchased, such as transposition into different keys, audio playback and different printing options. However, one cannot save the work to the hard drive or other disk, and a set number print-outs must also be purchased.

Music Library would aid the CMC in the promotion as well as the eventual distribution of works electronically.

Scanning of scores began in a test phase that year and was formally launched in 2000. The CMC partnered with Xerox to test a beta version of a printer-scanner. The CMC now uses two printer-scanners: a Xerox 255ST and a Sharp AR-M45OU. Images are first scanned and saved in Tagged Image File Format (TIFF), and are then imported into PaperPort software where the images are edited, assembled and cleaned. Digitized images are then saved in Adobe Acrobat PDF.

At first it was decided to move alphabetically through the master archive, so scanning began with the works of Murray Adaskin. Any requested works were also scanned at the time of the request and new acquisitions were scanned at the time of receipt. Three full-time scanners were employed to work on the project, complemented by the workshop staff that were already present. In addition, since many composers had begun using notation software such as Finale or Sibelius, they were encouraged to submit their scores in digital format, making scanning of a paper copy unnecessary.

Additional funding of projects from the Canadian Culture Online Program of Canadian Heritage in 2002-03 and 2003-04 provided further enhancements. The CMC received funding in 2002-03 to create the CMC Digital Music Library On-Line, which allowed for the creation of a new Web site and online library catalogue, as well as continuing the work on scanning. The new site also included enhanced information such as composer biographies, and score and audio samples. A new online learning tool, *Sound Progression,* was also developed.

A second project, "Emerging Composers," was funded in 2003-04 that featured composers under age forty. Over 150 scores were digitized, and score and audio samples were added as well. The project also allowed for the creation of *Sound Adventure,* an online learning tool for children.

Although there are no longer any special projects, the CMC continues to digitize the collection, for which there is one full-time scanner and an acquisitions coordinator to assist with scanning and the coordination of electronic submissions.

Challenges

From the beginning, it was quickly realized that progress was going to be much slower than expected. As a result, it was decided that priority would be given to new acquisitions and requested scores, while alphabetical scanning of the archive would be done at other times.

Scanning was (and is) difficult for a myriad of reasons, nearly all of them stemming from the nature of the original scores. Many of them are in unusual sizes. In the past, scores could be printed and reproduced in almost any size, and many were produced in large formats. However, the workshop scanners can only handle scores up to 11 by 17-inch in size; anything larger cannot be scanned at this time. Older master-scores are commonly transparencies, a vestige of the older reproduction systems, and in these cases a paper manuscript must be found and reproduced. There are also originals that are pencil manuscripts, or that have small margins or taped-on additions. These scores must be prepared before scanning; a photocopy is usually made to ensure a clean copy. If the master-score is not available, a scan must be

made from the bound circulating library score, which takes further time.

Recently, for example, over seven weeks of staff time was spent preparing the score and parts of Harry Somers' opera, *Louis Riel,* for a McGill University production in January 2005. No masters of the parts could be found and the only parts available were from the performance collection of the Canadian Opera Company. These parts were heavily marked and the scanning technician had to spend a great deal of time "cleaning" all the markings. Some works, such as a piano score, can be done relatively quickly, while large orchestral works with a complete set of parts can take much longer. The CMC staff members are experts in the scanning process and most works are done with speed and ease.

Electronic submissions have greatly aided in the expansion of the digital archive. Composers submit their works via e-mail, an online form, or on CD-R. Works are now only accepted in Adobe Acrobat PDF. It was proving too difficult and expensive to carry all the different kinds of notation software in all the versions being used by composers. The number of electronic submissions is steadily increasing. There are currently close to 5,000 scanned archives in the digital archive.

Almost all works in the CMC collection are still covered by copyright. This adds an additional control element that most other music-scanning projects have not had to consider, since they have chosen mostly scores and sheet music in the public domain. CMC composers, however, must receive royalty payments for the use of their scores. One solution has been to offer only brief excerpts from the scores. The samples are then attached to the bibliographic records in the library catalogue. Although helpful, their utility is obviously limited when it comes to study.

Future Possibilities

Now that the digital world has stabilized to some extent, we are looking towards the future. Our most recent initiative is a pilot project to provide electronic delivery of scores to our Vancouver branch beginning this spring. The BC Regional office has purchased print-and-bind equipment in order to handle the various sizes of scores and a special computer is being set-up at the office to handle the required software. Digital rights management (DRM) software is being employed to control output.

It was challenging to find DRM software suitable for a project of this size. It was decided recently to use the Web-based application of the vendor, SignetX. This product helps with the control and tracking of a document, but doesn't restrict the number of printouts. It is offered on a monthly subscription basis and is relatively easy to set-up and use. However, while it is sufficient for internal use, it is not suitable for wider distribution. It is likely that another DRM solution will have to be found before digital score delivery can be publicly offered, perhaps by late 2005.

Another possibility is to provide subscription access to "read only" scores. Subscribers would have access to the full scores, but would not be permitted to print. These materials could be made available through the CMC Web site and therefore the burden of storage and maintenance would not be on individual libraries. The read-only versions could be used for study or perusal purposes. If in-depth study is required or a decision is made to perform a work, it could

be then be printed for a fee, or a request could be made for a rental or purchase copy, printed and bound. Of course, this raises the question of long-term ownership versus access, but it is one way of taking advantage of the CMC's unique and varied repertoire.

As the digital distribution of scores becomes more common, with the added benefit of larger catalogues and standardized methods of delivery, the question of the acquisition of these items is becoming more relevant to institutions. The recent announcement of the collaboration between Naxos Music Library and SheetMusicNow is yet another indication of this emerging new reality. The CMC would welcome comments and suggestions from other music libraries and archives.