

Scanning Sheet Music to Produce MIDI Files*

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It seems incredible, but it is possible to produce MIDI files from sheet music using a personal computer and a scanner.

I have been using PhotoScore MIDI Lite 5 (PSML5) which takes relatively simple sheet music scans and produces MIDI files. PSML5 was priced at \$24, but the Lite version may not be currently available. They have a much more sophisticated and powerful version of their program priced at about \$250, but the Lite version meets my needs pretty well. Visit <http://www.neuratron.com> for current information.

There are at least two other software packages which perform similar functions. SmartScore MIDI Edition was mentioned by other COAA seminar participants as useful. It will turn sheet music into MIDI & .WAV files. It includes notation and MIDI editing as well as single-line TAB-to-notation recognition. SmartScore does MIDI playback and CD recording only; no printing. It is currently listed at \$49. SharpEye Music Reader appears to be similar, but I have no first-hand experience with it. SharpEye 2 costs \$169. SharpEye does not cope with handwritten music.

PSML5 will import images directly from a scanner, but I prefer to scan music pages in a graphics program and edit the images before “reading” them.

The page bears a 1925 copyright, so it is in the public domain. The arrangement duplicates the vocal line in the “piano right-hand,” so the upper melody line is duplicate information and may be deleted. It also has ukulele markings and a variety of dynamics which can not be reproduced on organs.

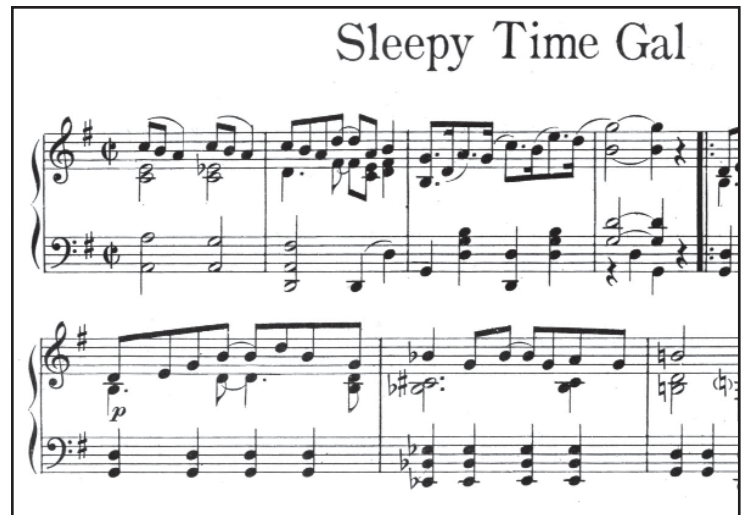


Figure 2. Graphics-edited version of the music in figure 1.

Figure 2 shows the version which I produced in the graphics editor, and which I used for processing. This was saved as a TIF file since PSML5 only works with that file format.



Figure 1. Portion of a scan of a sheet music page.

Figure 1 shows a portion of a page from *Sleepy Time Gal*, from an original which I borrowed at a local library.

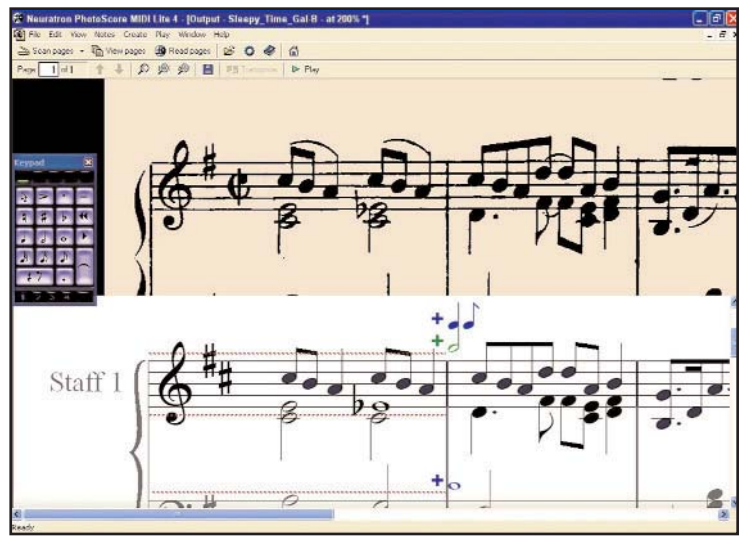


Figure 3. The rough conversion of the image to a staff-notation version which can be saved only as a MIDI file with the Lite version. The full version offers other file options.

* COAA Arrangers' Seminar summary presented at 2011 Olcott Beach rally

After launching PSML5 the image may be loaded with a File-Open command. The program then orients the image and lays out five line scores. These may be hand corrected if necessary. The Read Page command is then used to process the image.

Figure 3 shows the enlarged view of the first part of the first line of this tune after reading. The original scan is displayed at the top, and the “as recognized” version as Staff 1. As you can see, there are some significant errors in the first bar. It has mis-read both the Key Signature and Tempo. In addition, the half-note E-flat which should have been in the second part has been read as a whole-note in the first part.



Figure 4. The “Keypad” which allows selection of a variety of editing tools.

Figure 4 shows the “Keypad” which lets us select editing actions. There are additional corrections available by right-clicking with the mouse. At each stage of editing we have the option of audio playback of the file.

It took only about five mouse clicks to correct this portion of the song. Figure 5 shows the corrected version of the file.

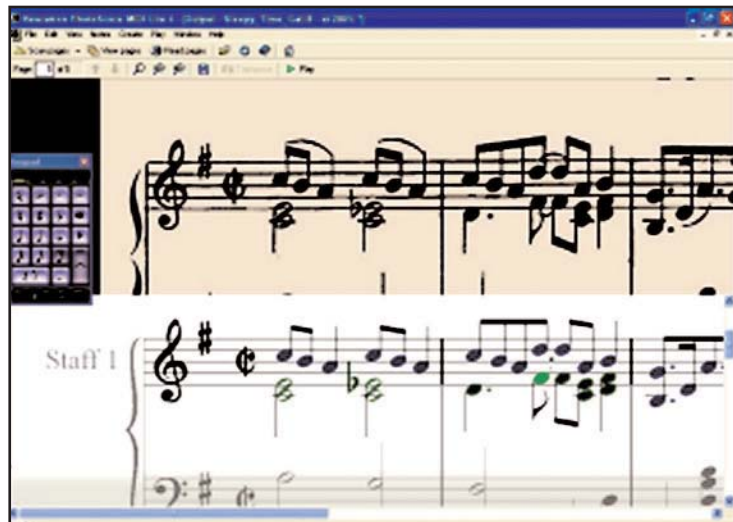


Figure 5. The corrected version of the processed image.

The file which we save is only a translation of the original sheet music to a MIDI file, not a file which we can expect to play satisfactorily on any organ. This is a starting point for the arranger’s work.

I have used PSML5, and my graphics editor, successfully to produce 20-note music from physical sheet music, PDF files of brass band parts, and page images downloaded from a website such as the Library of Congress’ collection of American music. It has certainly increased my productivity.

Wally Vendable focuses his mechanical music interests on 20-note crank organs.

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