

A General Discussion of NWC2's User Tools Facility

NWC2 has introduced a facility to automatically adjust the note-and-other-musical-object streams in a staff via a text-based interface call User Tools. Basically, a text representation of a selection of notes and other musical objects is sent to a third-party program, which then returns a similar stream to be reinterpreted back as the new contents.

In version 1.1 of the User Tool Kit, NWC auto-installs the following tools:

Arpeggiate, Compound Autobeam, Global Modification, Parts, Ranges, Retrograde, Statistics, Transpose Chords and Variable Dump.

(See below for a quick explanation.) For each of these tools, once User Tool Kit 1.1 is installed, the tool will already be available from the Tools | User Tool (Alt+F8) dialog.

What is the right tool for the job?

Arpeggiate – inserts grace-note arpeggiation in front of selected chords.

Compound Autobeam – does an autobeam-like treatment for compound time signatures

Global Modification – changes attributes of existing notation elements (eg alter pitch of notes, change tempo markings by a ratio, raise or lower rest markings,

Parts – separate parts in polyphony. Recently updated to also separate “notes” in a midi drum kit.

Ranges – return the note ranges in a selection. Useful for SATB arrangers

Retrograde – a tool that reverses the order of notes/chords/rests for retrograde variation. It deals with special endings quite well.

“Scratch pad” – Cut/copy/paste/merge with a scratch file. Some very useful tools for cutting/copying and merging selections based on particular attributes in a stream of notes and other music objects

Statistics – a musical “word (and punctuation!) count”

Tempers – add pitch bends to single notes for “temperament adjustment”. Very useful for early music or any other music that uses tunings other than equal temperament.

Transpose Chords – transpose chord names that have been written as text.

Tripletise – convert triplets that have been imported in a midi stream back to NWC triplet notation.

Variable Dump – provides a text version of the object stream that is sent to a user tool filter

The Noteworthy Scriptorium at www.vpmag.com/nwc/nwc2scripts.html provides up-to-date versions of the following scripts:

Compound Autobeam, Global Modification, Parts, Ranges, Scratch pad, Temperaments, Transpose Chords, and Tripletise.

For a more detailed explanation than that given above, see their separate documentation and tutorials at www.vpmag.com/nwc/nwc2scripts.html.

How to install new tools.

Since all tools so far made widely available have been written in PHP, the first thing to do is make sure that you have a PHP interpreter installed on your computer. Unless you are computer savvy and have other reasons for installing a more comprehensive version, simply use Noteworthy's User Tool Kit. This will install a small standalone version of the PHP interpreter (sufficient for all tools written so far) in

c:\Program Files\Noteworthy Composer 2\PHP (or similar, depending on your Windows and NWC installation).

Preinstalled scripts will be found in

c:\Program Files\Noteworthy Composer 2\Scripts and we suggest that you keep all future scripts (or other self-contained user tools) in the same place.

When installing a new tool which is a script, simply save it to the above folder. *NB: If saving tools from the Scriptorium, Right-Click and "Save As..." to ensure that the extension is changed to .php. PHP files on the Scriptorium are stored there as .php.txt so that they aren't accidentally executed as Server-side scripts on the Scriptorium.*

Then, when adding the tool to your tools list (Alt-F8, or Tools | User Tools), press the Add button, enter an appropriate name for a tool, and use the browse button to navigate to the desired tool. If it is a PHP file, NWC will automatically add an invocation of NWC's installed PHP interpreter.

IMPORTANT!

Normally, a User Tool will require some extra information, given as parameters on the command line description in the User Tool Description dialog (invoked when you press the New or Edit button in the User Tool dialog). These parameters will vary from tool to tool. Read the specific documentation for the tool to work out what you need to add. Most tools supplied on the Scriptorium have a standard response to a sole parameter of "help" (don't include the quotes), which will give an explanation of the tool and what other parameters need to be provided.

Some auto-installed tools might include pre-installed arguments which call a mechanism in NWC2 which creates a Windows dialog that prompts the user for specific information which is used as parameters to invoking the user tool.

To Run a Tool:

Press Alt-F8 (or use the menu command Tools | User Tool) and select the tool that you wish to run. You may need to Edit the selected tool to alter parameters to make it do what you really want. Then click the Run button.

Glossary of terms used in other tool documentation.

Parameter = extra information (perhaps one of several items) given on a command line description of a user tool. Normally separated by spaces, if they *include* spaces, they will need to be enclosed in double quotes.