Composers' Desktop Project

About the *Sound Loom* GUI

An Intelligent Composing Environment for CDP by Trevor Wishart

The Concept: a composer's worktable

Imagine you are sitting down to begin your day's composing. To-day you are planning to work with the bray of a donkey, so you begin by collecting up all your donkey sounds and placing them on the *Sound Loom* **Virtual Workspace**. From these files you then select ('Choose Files') the ones with which you want to work. ... The processes available *for those types of file* are highlighted. ... At the end of your working day, the files you have retained or created on the Workspace are *automatically remembered and will be reloaded* when you begin work again. This in a nutshell is the practical con-cept behind **Sound Loom** as an 'Intelligent Composing Environ-ment'.

Summary: 22 Key Features

1. **The ability to remember** the process you ran last, the process parame-ters you last used, the previous state of the workspace, and the files you were working with last.

2. **The ability to store** parameter **Patches** and **Favourite Processes**.

3. **The ability to design in a graphic environment** your own multi-proc-ess **Instruments** (with their own parameters) and keep them on the sys-tem. This is probably the most advanced feature in the interface.

4. **The ability to edit breakfiles** either graphically: including mouse-on-screen editing, global functions to distort the data, quantisation of data, etc., or as textfiles.

5. **Graphic display and editing of binary pitch data files (.frq)**, showing areas of pitch, silence and noise. This is especially useful for the various (new in Release 5.0) speech transformation routines.

6. **Graphic display and editing of soundfiles**.

7. **A Musical Calculator** which can convert between musical units of many kinds as well as perform normal 'calculator' functions.

8. **A Table Editor** with which you can do almost anything you can imagine with data in columns, particularly as in breakpoint files.

9. **A Reference Pad** where values can be stored, and from where they can be grabbed for use in the **Table Editor**, the **Music Calculator**, or as parameters to functions. In other words, it acts as a composer's scratchpad.

10. A **Music Testbed** in which various complex processes can be explored with the help of specialist tools designed for the task. One of these, for example, deals with the process of 'inbetweening': i.e., creating multiple soundfiles that form intermediate states between two or more soundfiles. Another helps create and rearrange tonal chords.

11. **A comprehensive Help facility** attached to every item on every major window on the system.

12. **A comprehensive New User Help** system which provides instructions for new users on how to get started with the system.

13. **A comprehensive Information** system attached to every process running on the system.

14. **A Which? system** to allow the user to find an appropriate process.

15. **A system to keep track of your File Names**, so that recently used filenames can be easily used again (with the click of a mouse), or varied as you go – a typical requirement when devising sound-variants in the course of composing work.

16. **The ability to remember the state of the Workspace** (or the currently selected file) for restoration later. The final state of the Workspace, at the end of a session, is automatically remembered and restored when you begin a new session. You can also save the Workspace at any time you like, and recall any one of these saved states later.

17. **A built-in Notebook** where you can keep a record of your day's work.

18. **A built-in History** tailored to the needs of your system, allowing processes to be recalled from today's session *or any past session*, with checking for the continued existence and relevance of files used, and the ability to substitute new files where needed.

19. **A system to check your mixfiles:** i.e., to check whether or not the soundfiles listed still exist. The system keeps track of all renaming and deletions of files, so you can trace what the file might now be called if it has been renamed or backed up, or see if it genuinely no longer exists.

20. **An automatic Log (history data) timer**, so that you can set the amount of time you want to retain Logs or Saved Workspaces. This timer will trip in after a certain time, or when a certain amount of data has accumulated, and the timing can be adjusted to suit your requirements.
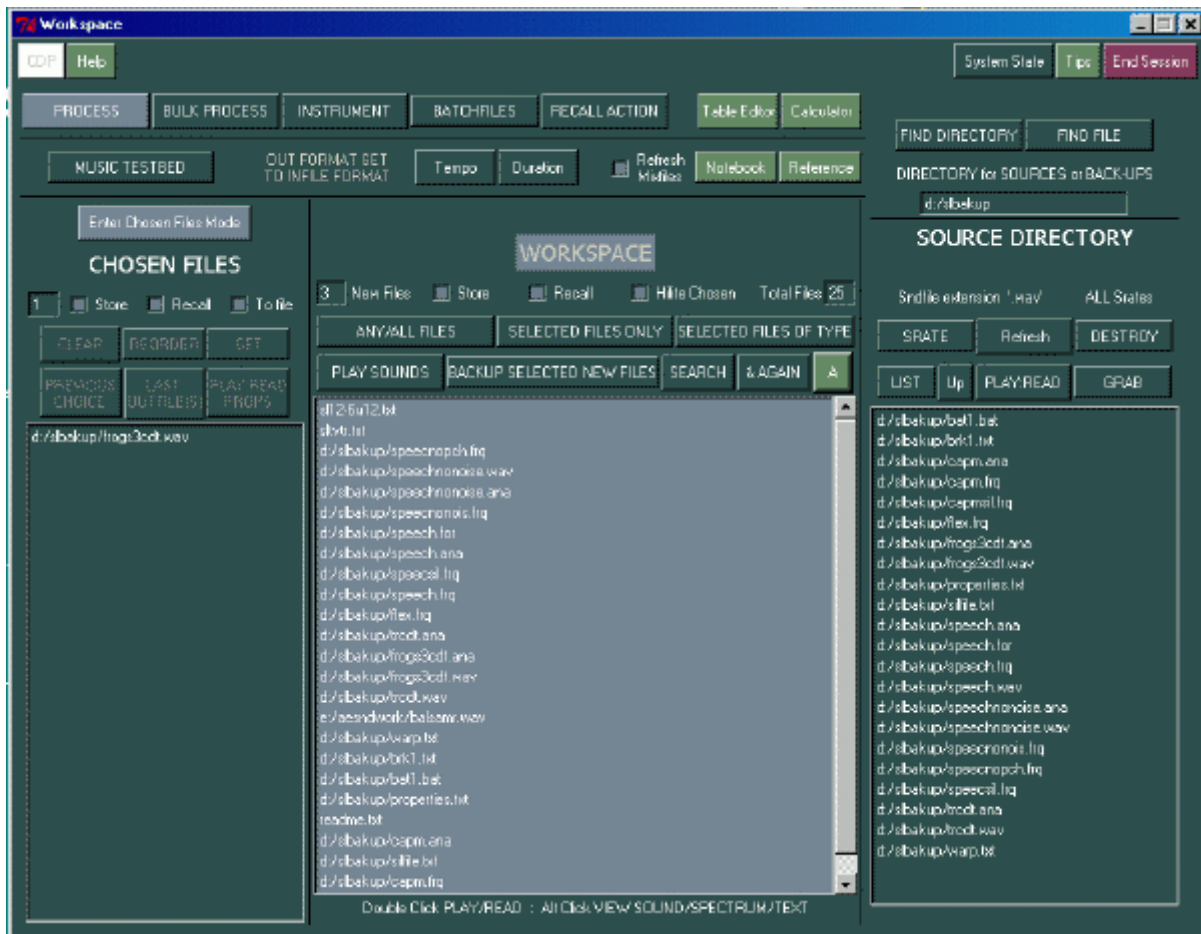
21. Knowledge of which executables you have on the system.

22. The ability to Redesign the graphics of your interface, to suit your own preferences.

SCREENS from the *Sound Loom*

Sound Loom Main Workspace with 3 panels

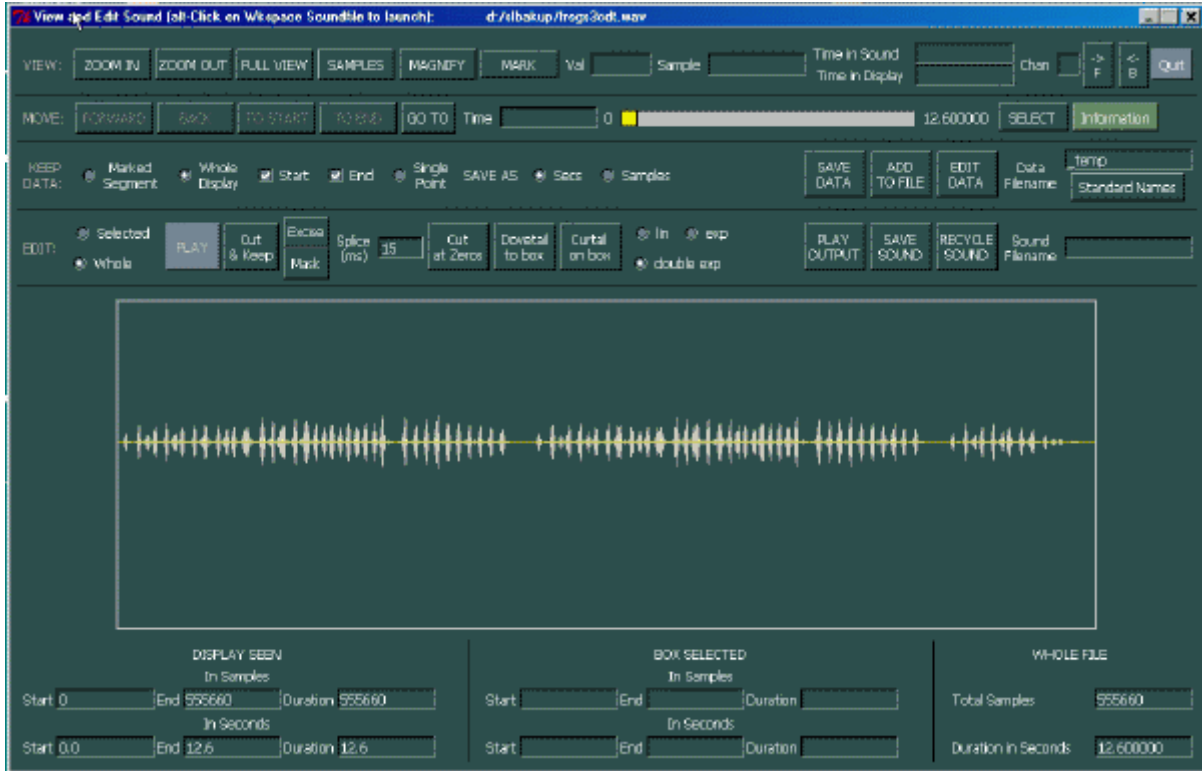**Movement flow is Right to Left: Sources, Workspace selection, Chosen for Processing)**

Sound Loom Workspace

Source files have been retrieved from the directory named **slbakup** on drive **d:** and are listed in the Right Panel. Files selected for the current project are shown in the Centre Panel, the **Workspace** itself. 'Frogs3cdt.wav' is **Chosen** for processing and the **Process** button is highlighted, ready to invoke a sound transformation function.
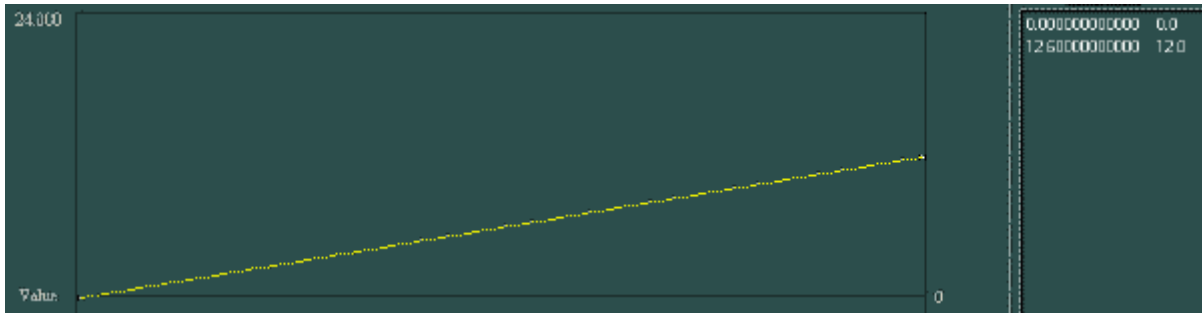
Soundfile Editor

(The chirrups of the frog are clearly visible)
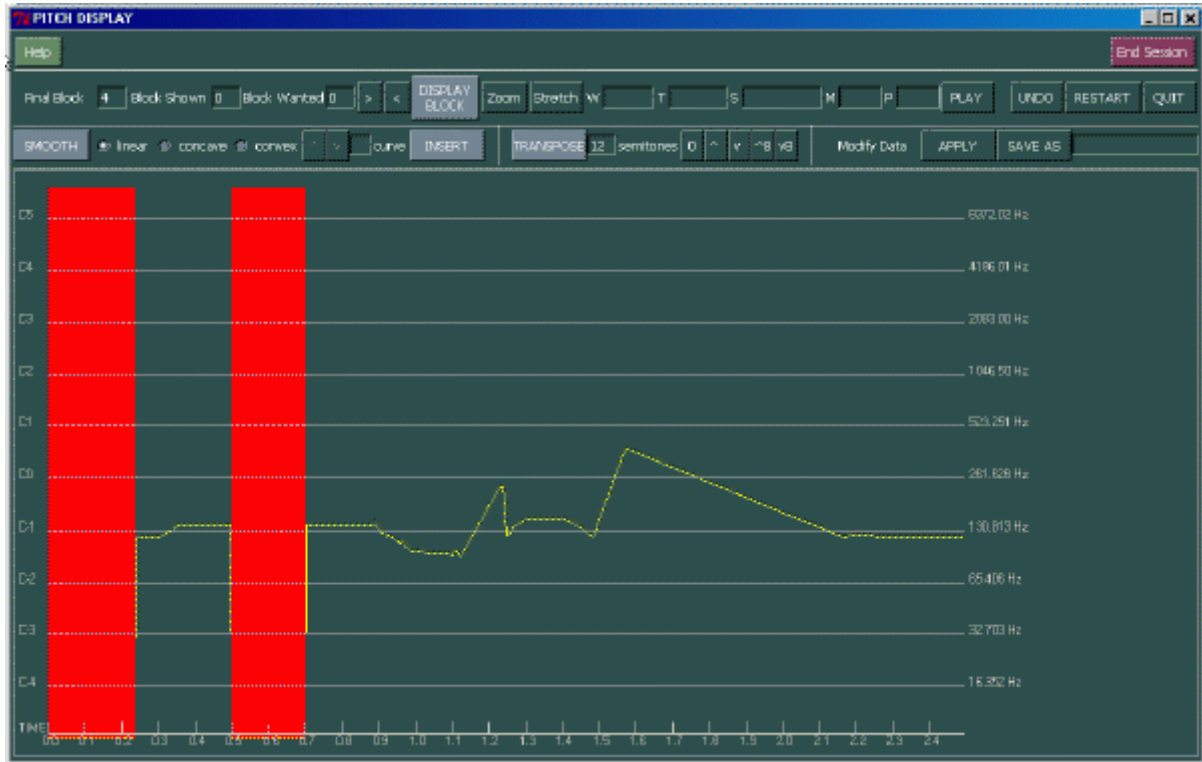

Graphic Soundfile Editor

Graphic Breakpoint Editor

Graphic Breakpoint Editor

(continued)

Binary Pitch Data File Editor
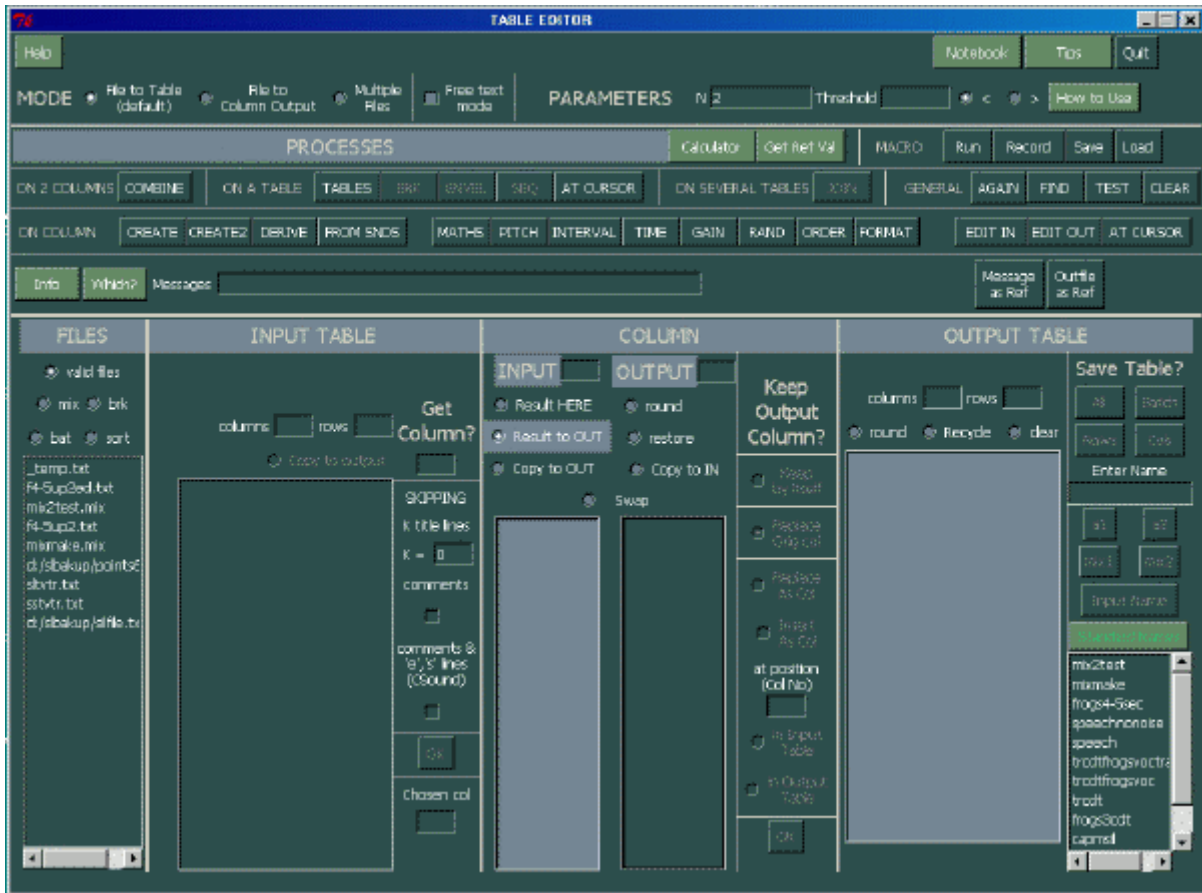
(Areas of noise are shown in red)

Pitch Trace Editor

This image displays the pitch trace file (**.frq**) created by REPITCH GETPITCH, showing areas of pitch, silence and noise in different colours. There is a vertical pitch scale in octaves, and a time-line. Additional editing facilities enable you to massage the pitch trace. This tool has been developed especially for use with the new Release 5.0 functions for handling speech material.
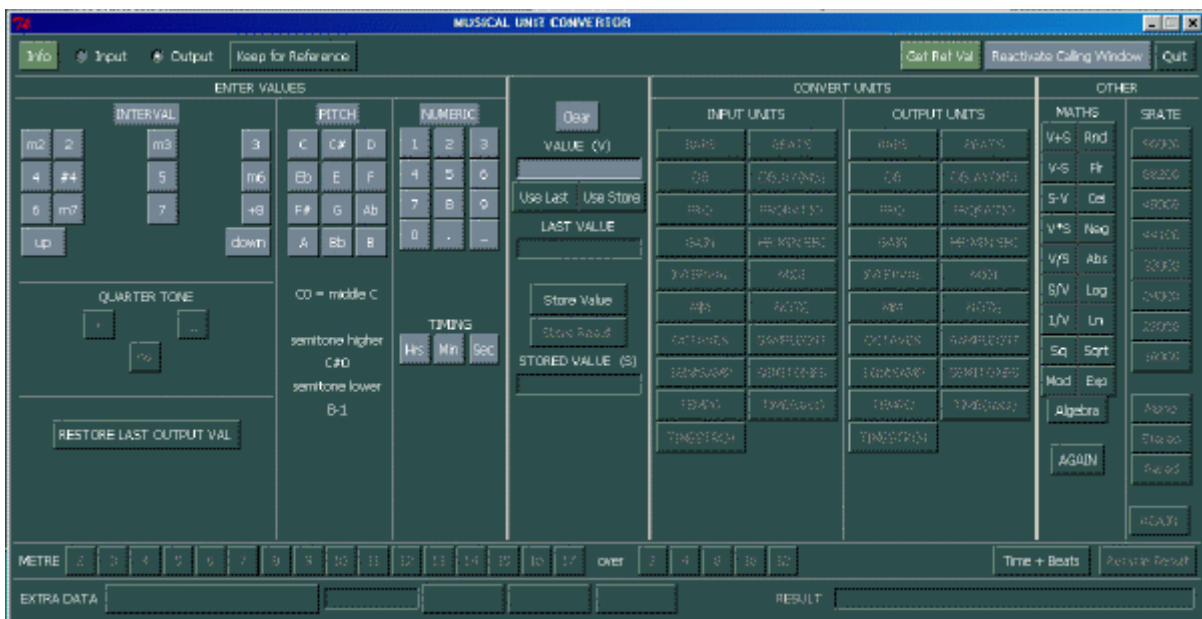
(continued)

Table Editor

(Information flow is from left to right)

The Table Editor performs all kinds of operations on columns of numbers, such as the *time value* columns in breakpoint files.
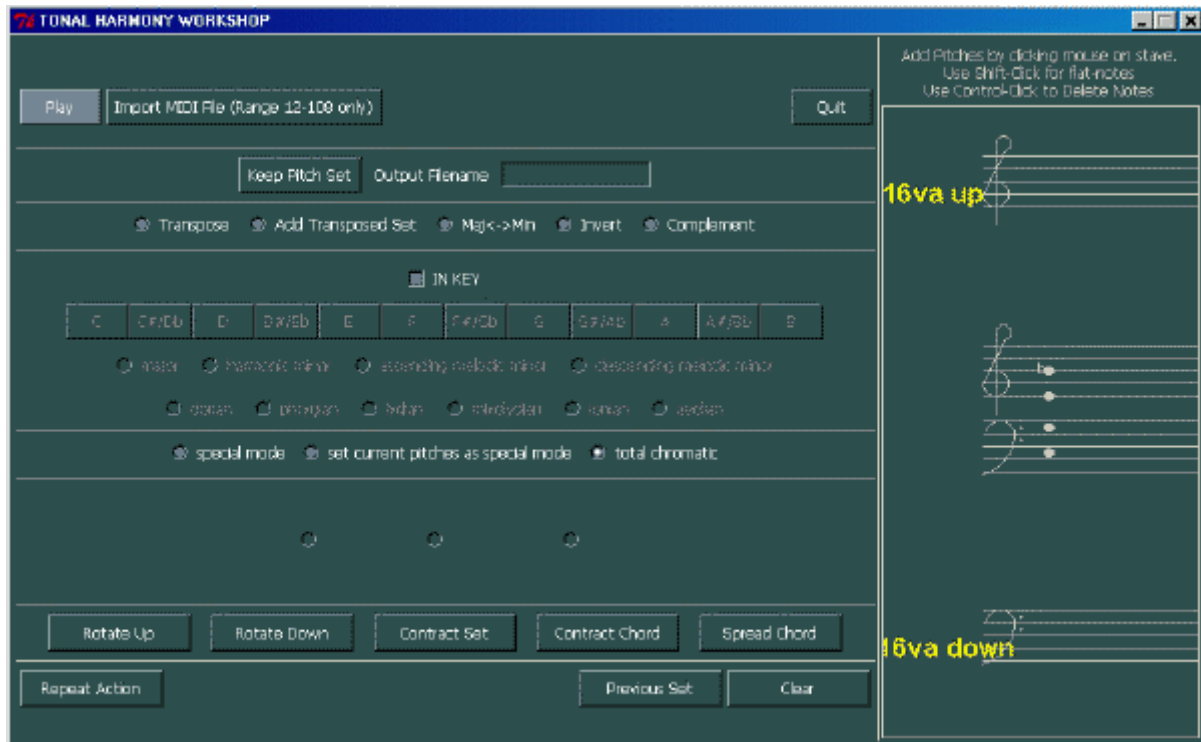
Music Calculator

(The Music Calculator)

The **Music Calculator** is a handy tool for converting between the many different kinds of data values used in computer music. It also functions as a normal calculator.
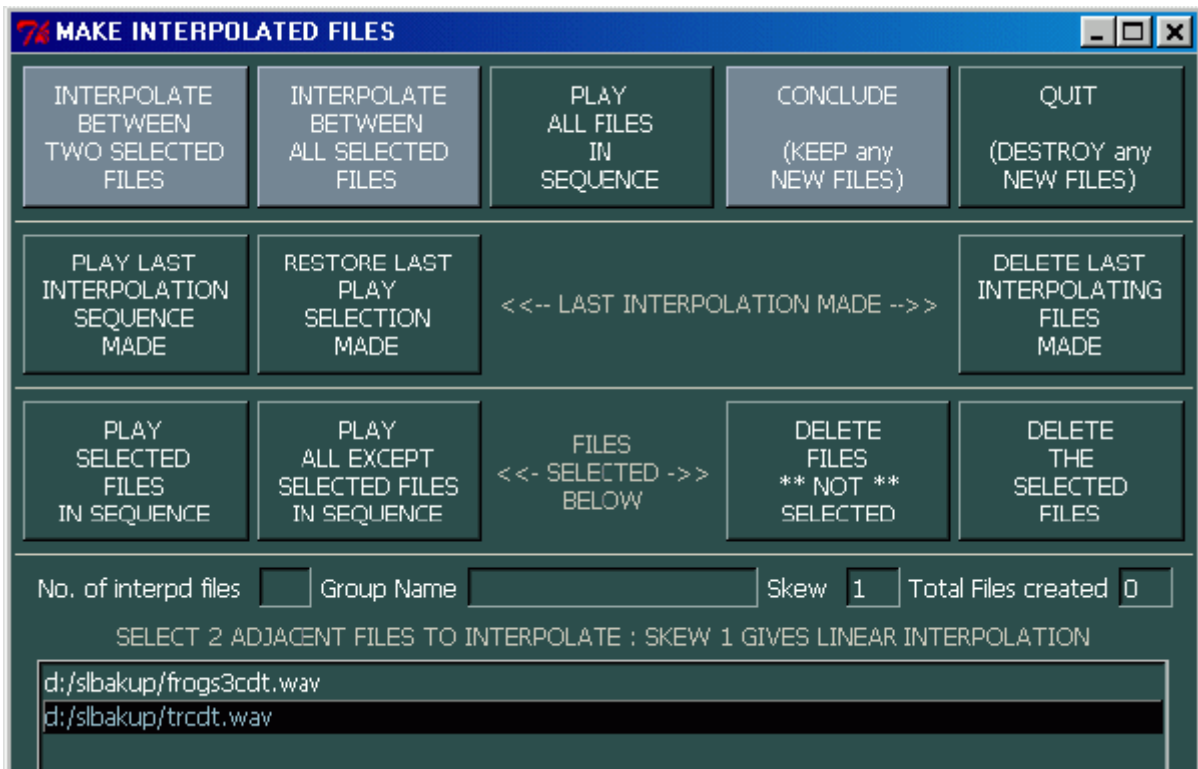
Music Testbed

The Tonal Harmony Workshop

Tonal Harmony Testbed

The Interpolator (between soundfiles) Workshop

Soundfile Interpolator

The **Music Testbed** enables you to explore and plan various high level musical relationships.

Last updated: 24 May 2006