



About the Client:

This product was developed jointly with inputs from a Professional Music teacher in France.

Client Requirements:

Client wanted an application that allows the user to interactively edit audio files and create music library.

Solutions Provided by Robosoft:

Robosoft developed an application that allowed the user to edit the audio files in various formats and mix the audio files together to create music. It has an easy-to-use Metallic user interface of Mac OS X. It is a Universal Binary application running natively on Intel.

The following were some of the features of the developed application:

1. Create and store music library / projects which could be used later for presentations to audience
2. Access user's audio files from anywhere on their disk, network disks, their *iPod* or their *iDisk* or a remote *ftp* server
3. Edit their audio files just like simple image files by *selecting, copying, cutting and pasting* of waveforms
4. Change the *pitch* and *tempo* of their audio files
5. Save the edited music
6. Open multiple music libraries in parallel and work on them simultaneously
7. Import the *iTunes* library

The application was developed with the following UI elements:

1. The Browser View

The user's can easily browse all their audio files irrespective of if they are on local disk, network disk, *iPod* or *iDisk* or on a remote *ftp* server. Application can connect to all of them and download or upload the audio files. They can also play the files in place. User may also import their *iTunes* library and use those audio files in their music library.

2. The Session List View:

User creates their music library by dragging the audio files and dropping them into this view. A file hierarchy may be created. They can select files and then get their *pitch* and *tempo* changed using the *Tempo and Pitch Shift View*. After editing the files, they can then drag the files back to their folders on local, network disks or any other location like the *iDisk*, *iPod* or the *ftp* server.

3. The Tempo and Pitch Shift View:

This view is used for editing / changing the *tempo* and *pitch* of the audio files in the *Session List View*.

4. The DJ View:

The user is presented with two revolving disks similar to a *Disk Jockey* in this view. They can drop audio files on these and play the two files synchronously. They can increase / decrease the speed of playback, change the balance of the audio output between the right and left speakers. They may also record this effect down to a file, which may be played back later.

5. The Mix board View:

This view is used for editing the music. It supports six tracks. The user can drag and drop the files onto these tracks for editing them. The files get displayed as waveforms. This view has a time scale, which the user can use for editing the audio data. User has the options to select, cut, copy, or paste the audio files as whole or he may cut them into parts and edit them. The user may drag the waveforms around during editing. The user can selectively play one or more of the size tracks. The selected tracks can be played back synchronously. User can set the volume for individual tracks, or set their balance. All these operations can be performed even when the *mix board* is being played. The user can set the *tempo* for the *mix board* to make editing easier. Gridlines may be switched on or off to help the user in editing. The placement of gridlines is dependent on the *tempo* value. *Mix board files*, which act as directions / guidelines for music editors, may be used while editing. A simple drag and drop of a *mix board* file onto this view will set this. The user may switch on or off the display of these guiding lines. They may also mix down the contents of the mix board as an audio file.

Environment Used:

1. **Development Environment** Xcode 2.2, Mac OS X 10.3
2. **Tools and technologies** Cocoa Framework (Obj-C), Core Audio, QuickTime
3. **Duration of the Project** 4 months

Snapshots of the Application:



Figure 1: Main Window

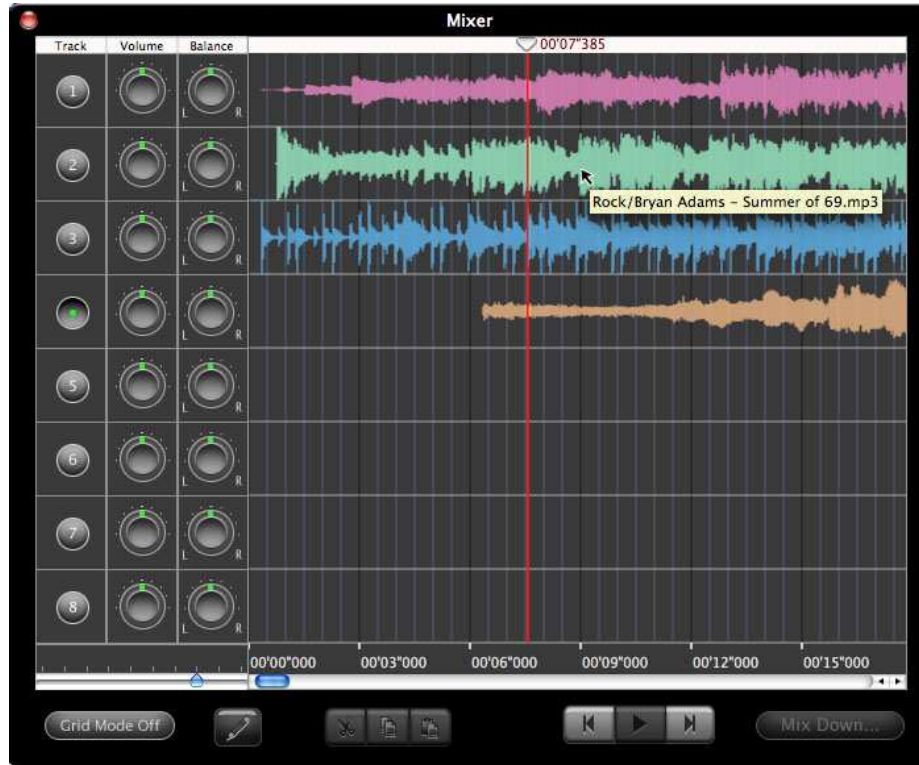


Figure 2: Mixer Window