

SingingStudio | MasterPitch

software applications for iOS platforms

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Outline

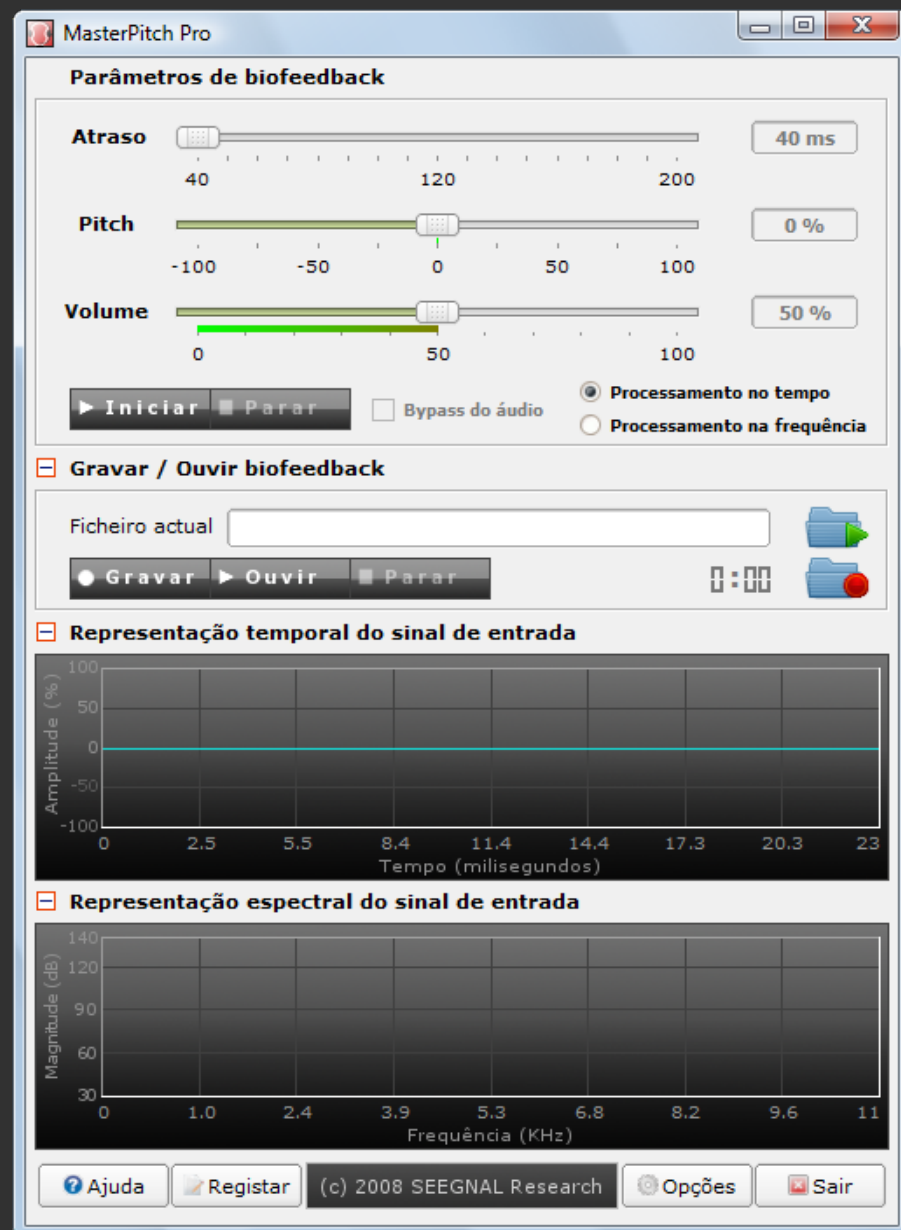
- Motivation
- Prior Work - Windows Versions
- MasterPitch
 - Requirements and Specifications
 - Overall Architecture
 - iOS Implementation
 - Demo
- SingingStudio App
 - Requirements and Specifications
 - Overall Architecture
 - iOS Implementation
 - Demo

Motivation

- Development and port of existent Windows-based applications for the iOS platform, namely:
 - MasterPitch
 - SingingStudio
- Specification of a reduced set of features for each app in order to better met the mobile market requirements.
- Adaptation of the user interface for the multi-touch paradigm.
- Redesign of both apps.

Prior Work - Windows Versions

MasterPitch



SingingStudio



Prior Work - Windows Versions

MasterPitch

Main Features:

- Alters the acoustic feedback using two faders for DAF/FAF
- FAF processing can be processed in two ways:
 - time-domain (formant preservation)
 - frequency-domain (basic pitch shifting)
- Records the processed signal.
- Temporal and spectral representation of the input signal.

SingingStudio

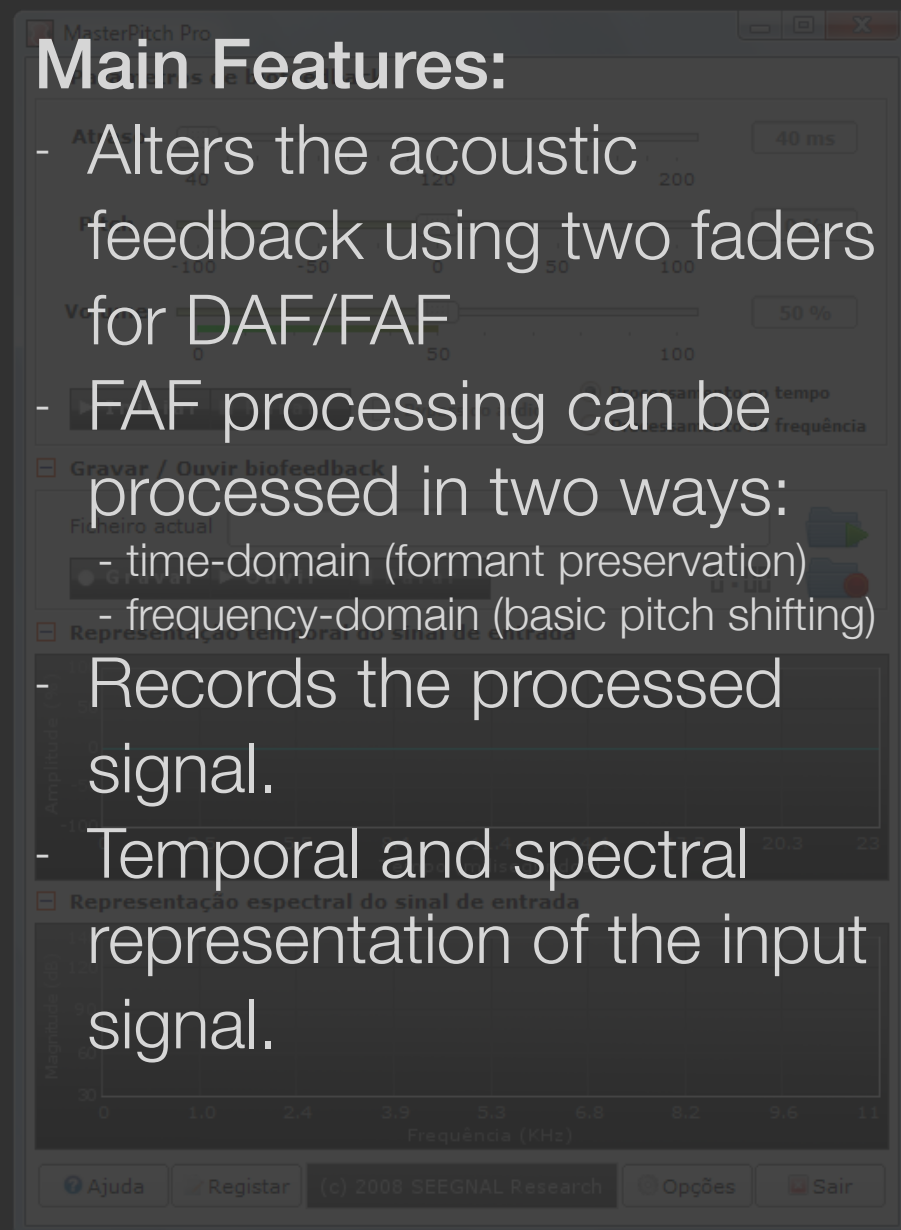


Prior Work - Windows Versions

MasterPitch

Main Features:

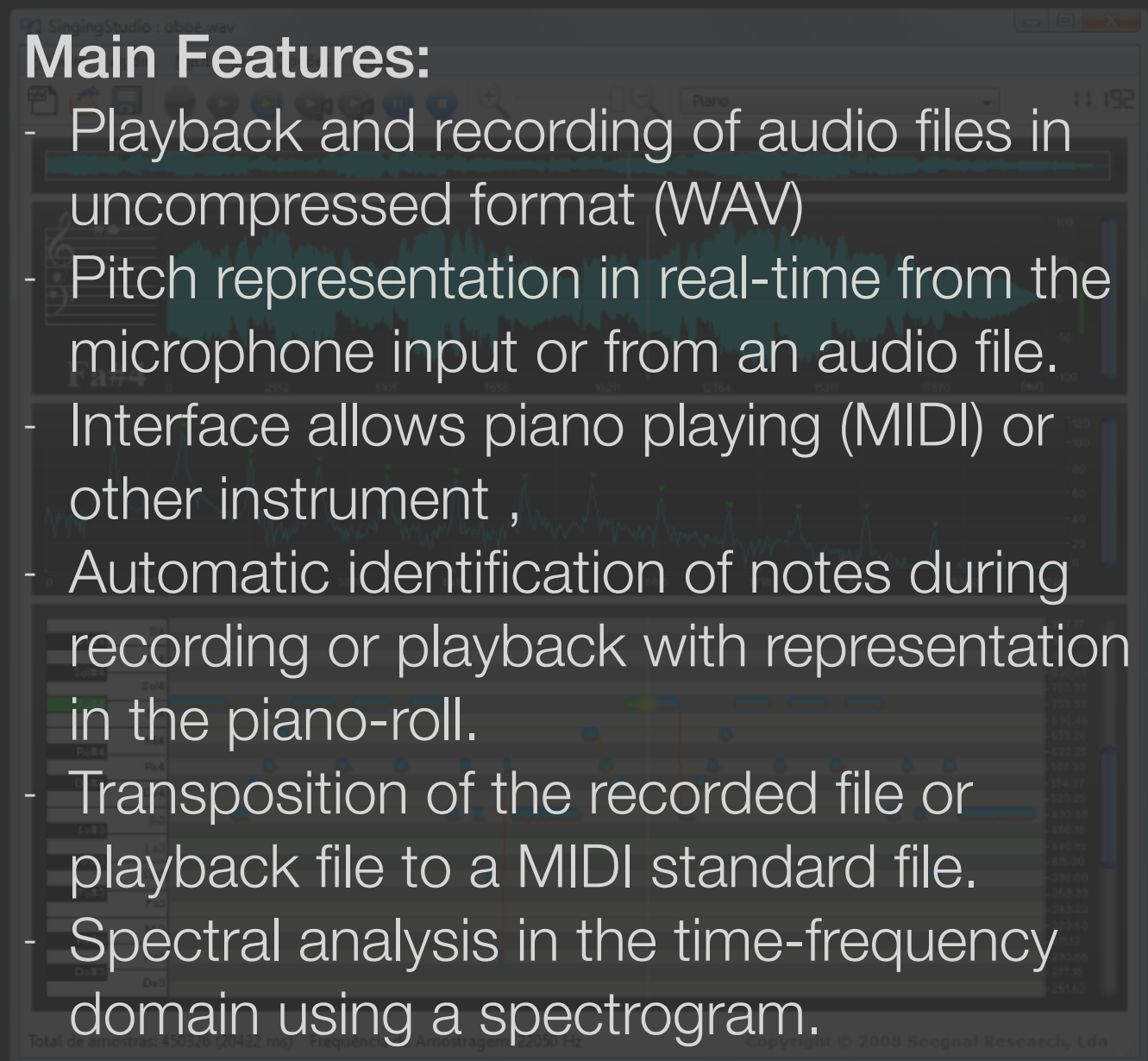
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- FAF processing can be processed in two ways:
 - time-domain (formant preservation)
 - frequency-domain (basic pitch shifting)
- Records the processed signal.
- Temporal and spectral representation of the input signal.



SingingStudio

Main Features:

- Playback and recording of audio files in uncompressed format (WAV)
- Pitch representation in real-time from the microphone input or from an audio file.
- Interface allows piano playing (MIDI) or other instrument ,
- Automatic identification of notes during recording or playback with representation in the piano-roll.
- Transposition of the recorded file or playback file to a MIDI standard file.
- Spectral analysis in the time-frequency domain using a spectrogram.





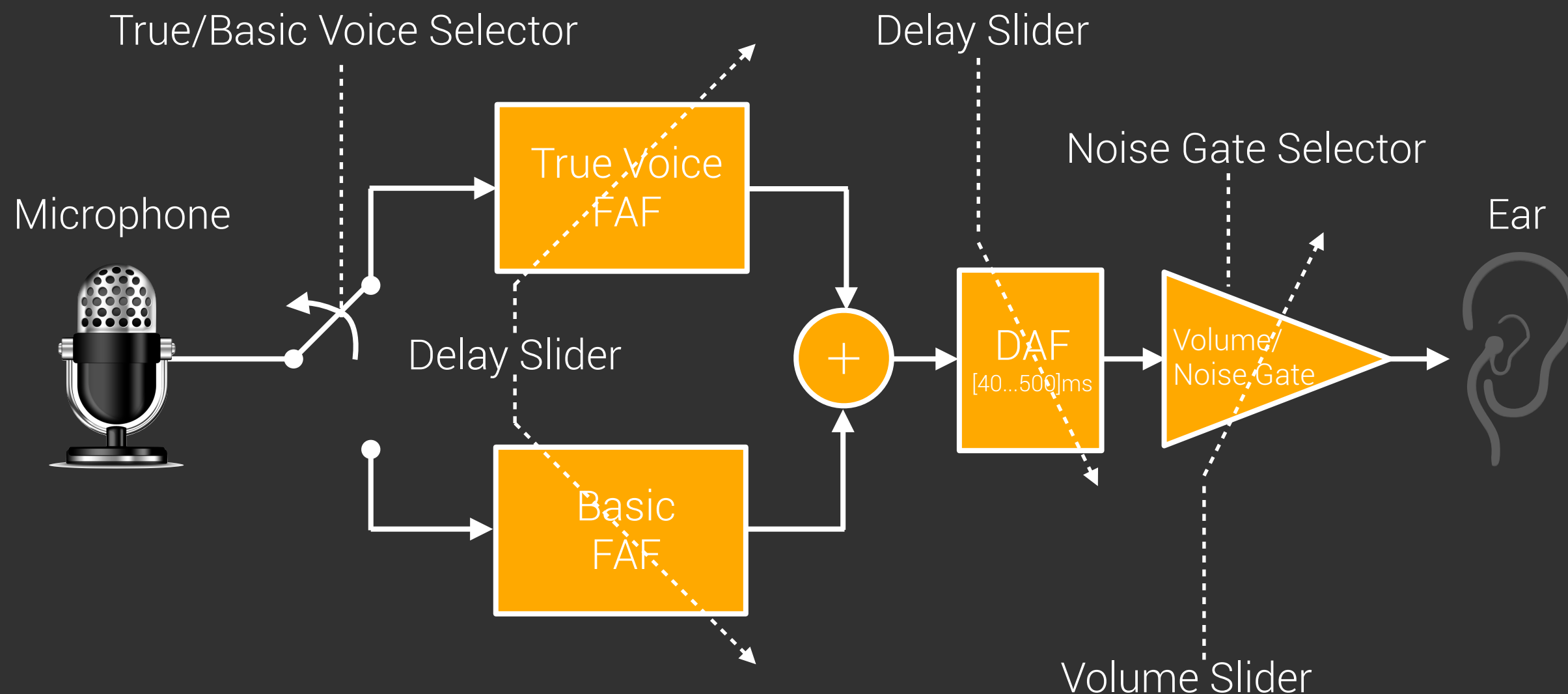
MasterPitch

Requirements and Specifications

- Mouth-to-ear acoustic feedback using two faders for DAF and FAF
- Button for FAF method selection:
 - Time-domain
 - Frequency-domain
- Audio visualization in time-domain.
- Noise Gate addition
- Removed in iOS:
 - Recording functionality
 - Spectral visualization

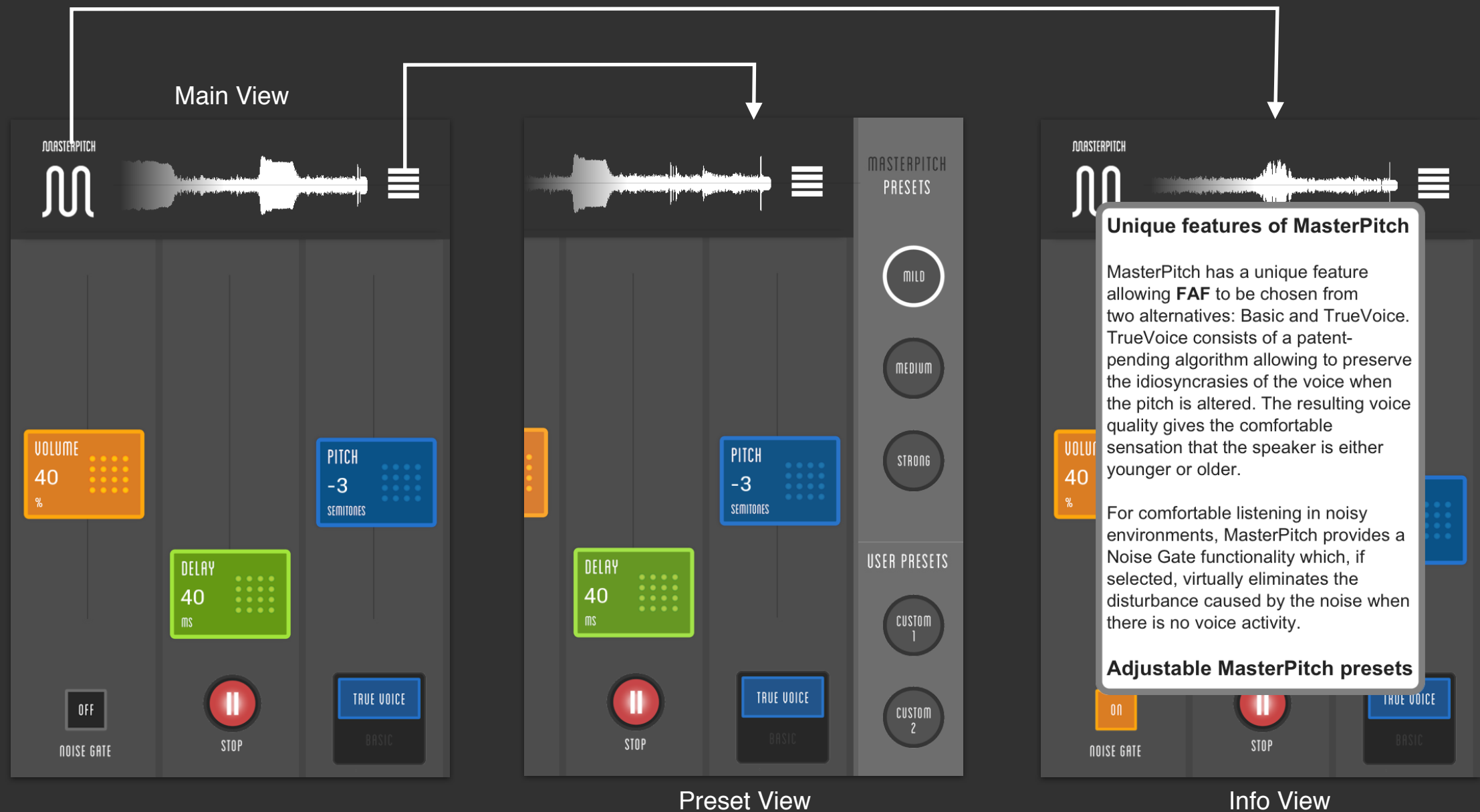
MasterPitch

Overall Architecture



MasterPitch

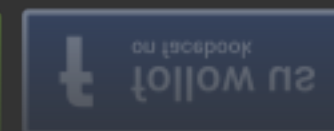
iOS UI Implementation





MASTERPITCH

fluency-enhancer app



More Info: www.masterpitchapp.com

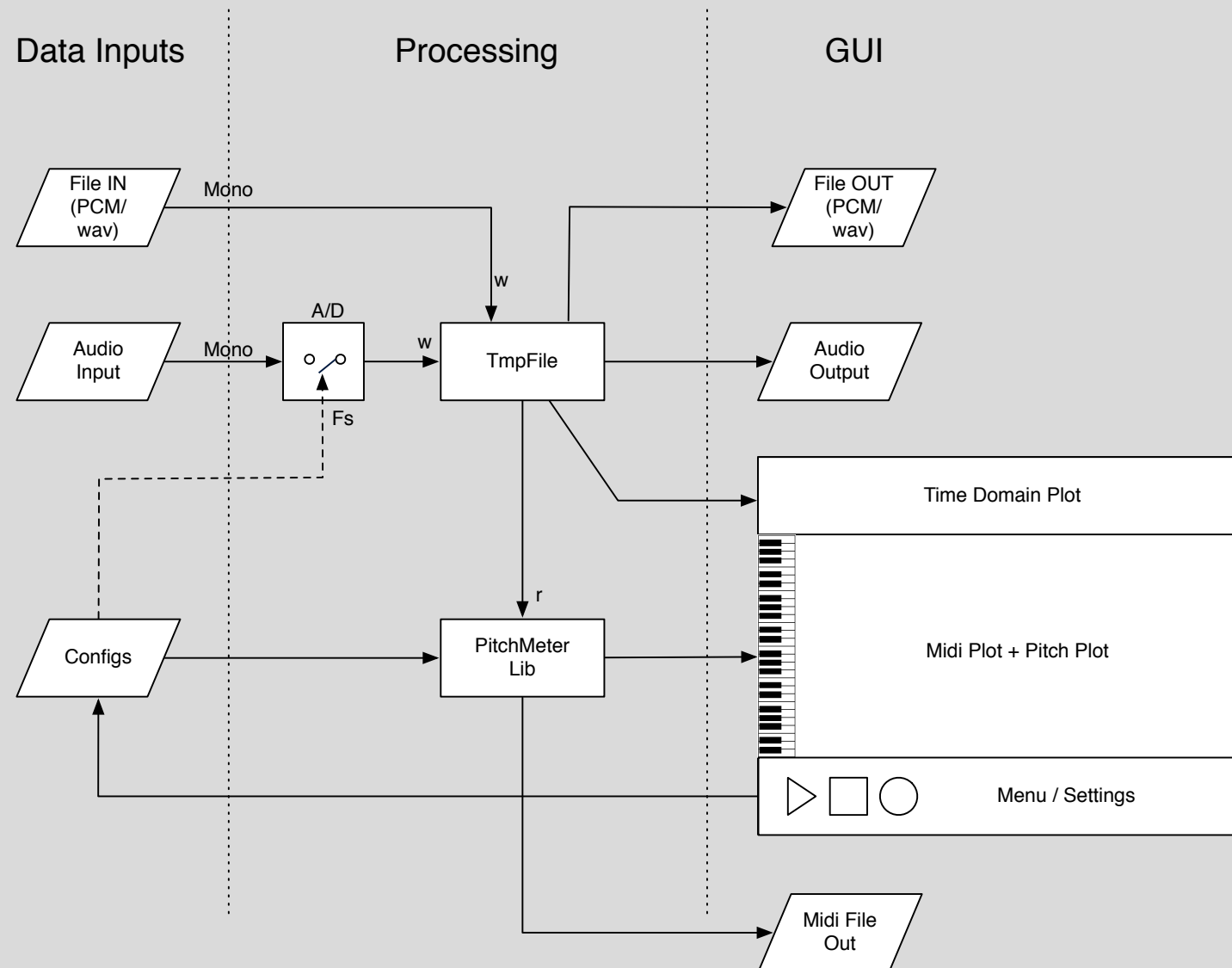
SingingStudio

Requirements and Specifications

- Playback and recording of audio files
- Pitch representation from:
 - the signal at the microphone input in real-time
 - audio file in WAV format
- **User interface includes:**
 - automatic identification and representation of musical notes in the piano-roll
 - piano playing or other instrument (MIDI)
- **Transposition of recorded audio to a MIDI file**
- **Removed in iOS version:**
 - Spectral analysis in the time-frequency domain using a spectrogram was removed

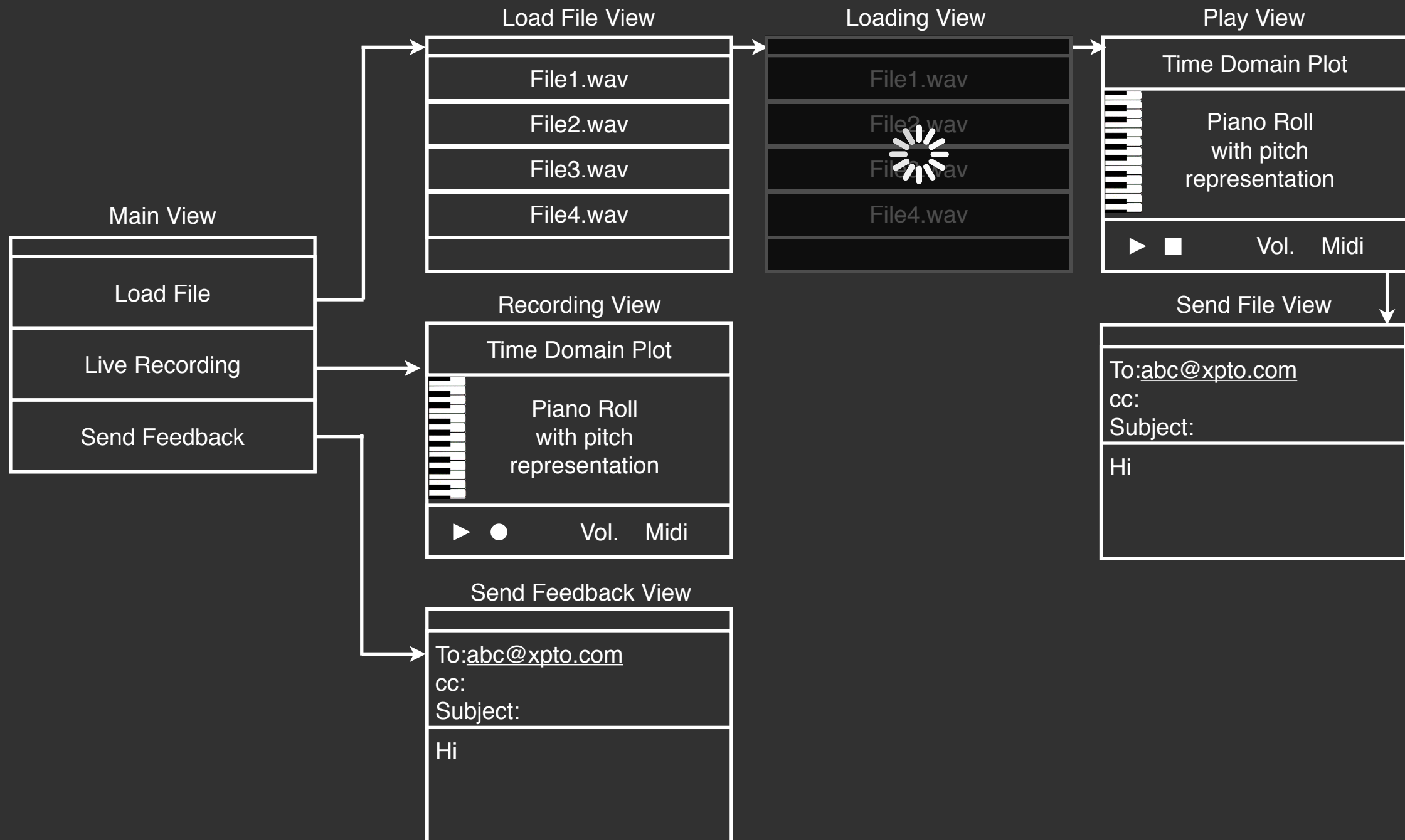
SingingStudio

Overall Architecture



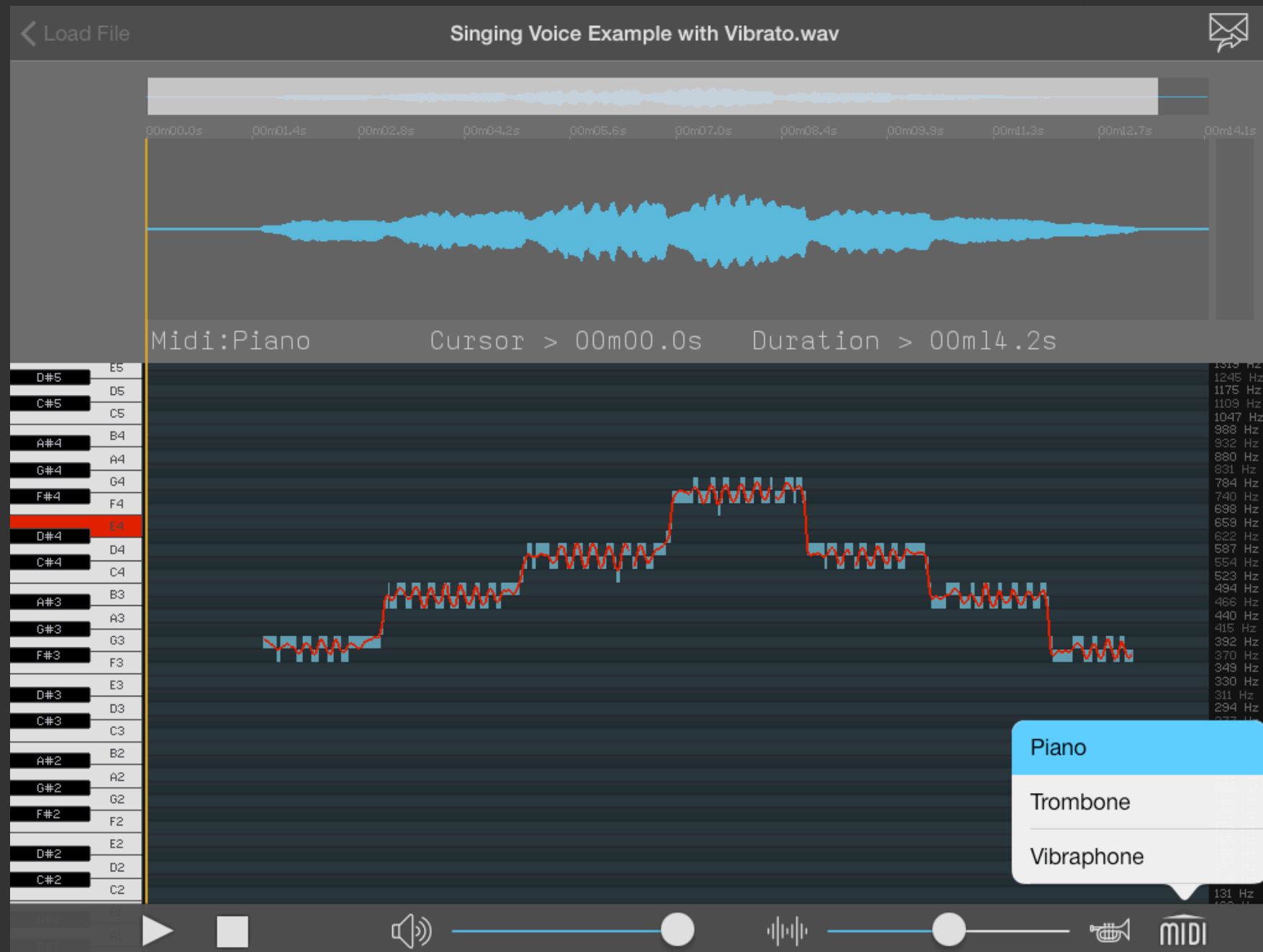
SingingStudio

iOS UI Implementation



SINGINGSTUDIO

SEE HOW YOU SING



Thanks!

