

Java Recorder

A Tool For Cross-Platform Audio Recording and Video Transcoding

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Background

- Voices Heard Media's question widget demonstration
- Audio answers are currently published using a Windows-only desktop application

Motivation

- Answer questions from web interface
- Minimal configuration
- Cross-platform
- Process video on the client

Envisioned Use

- Talk show radio host chooses question from VHM's question widget
- Recorder opens, host clicks record and begins answering the question
- Host stops recording and uploads video, which appears as the answer to the selected question

Features

- Written in Java, uses Swing widgets for correct look and feel on all platforms
- Easily adapted to be launched from the web, no installation necessary*

*mencoder required on Linux

Features

- Record from and playback to any interface on the system
- Uses mencoder to combine image and audio into Flash video format

Design

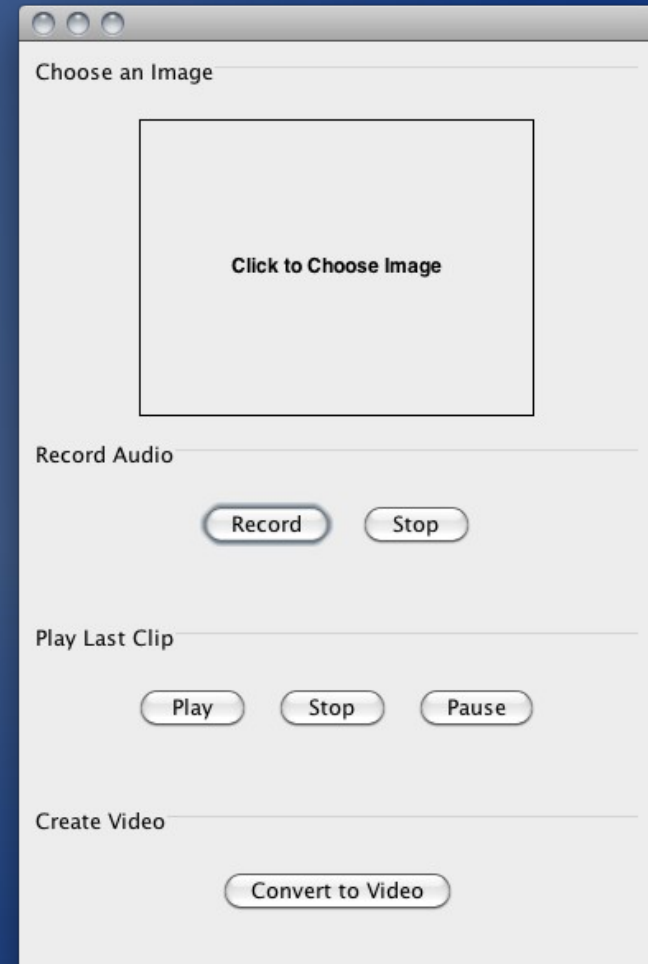
- MVC
- Model contains threads for playback and recording
- View contains SwingWorker that calls the audio/video conversion for integration with progress bar

Design

- Platform dependent temporary file storage
- Uses Java sound APIs
- Preferences API

User Interface

- Choose image, record audio, and create video in 3 clicks
- “On Air” icons indicate state, either recording or playback
- Progress bar appears to indicate video conversion process



Video Creation

- Create silent video from chosen image
- Combine silent video with recorded audio clip into AVI
- Transcode resulting AVI to FLV

Limitations

- Java sound API provides little low-level access
- Reports incomplete information about supported audio formats

Lessons

- Threaded GUI application
- Audio recording and playback

Future Work

- Package for Web Start, mencoder binaries in separate packages
- Integrate with VHM's web interface
- Lower level control of audio hardware
- Non-linear editing and playback

Questions?