

# Modern Singing

*Practice. Sing. Become a star.*

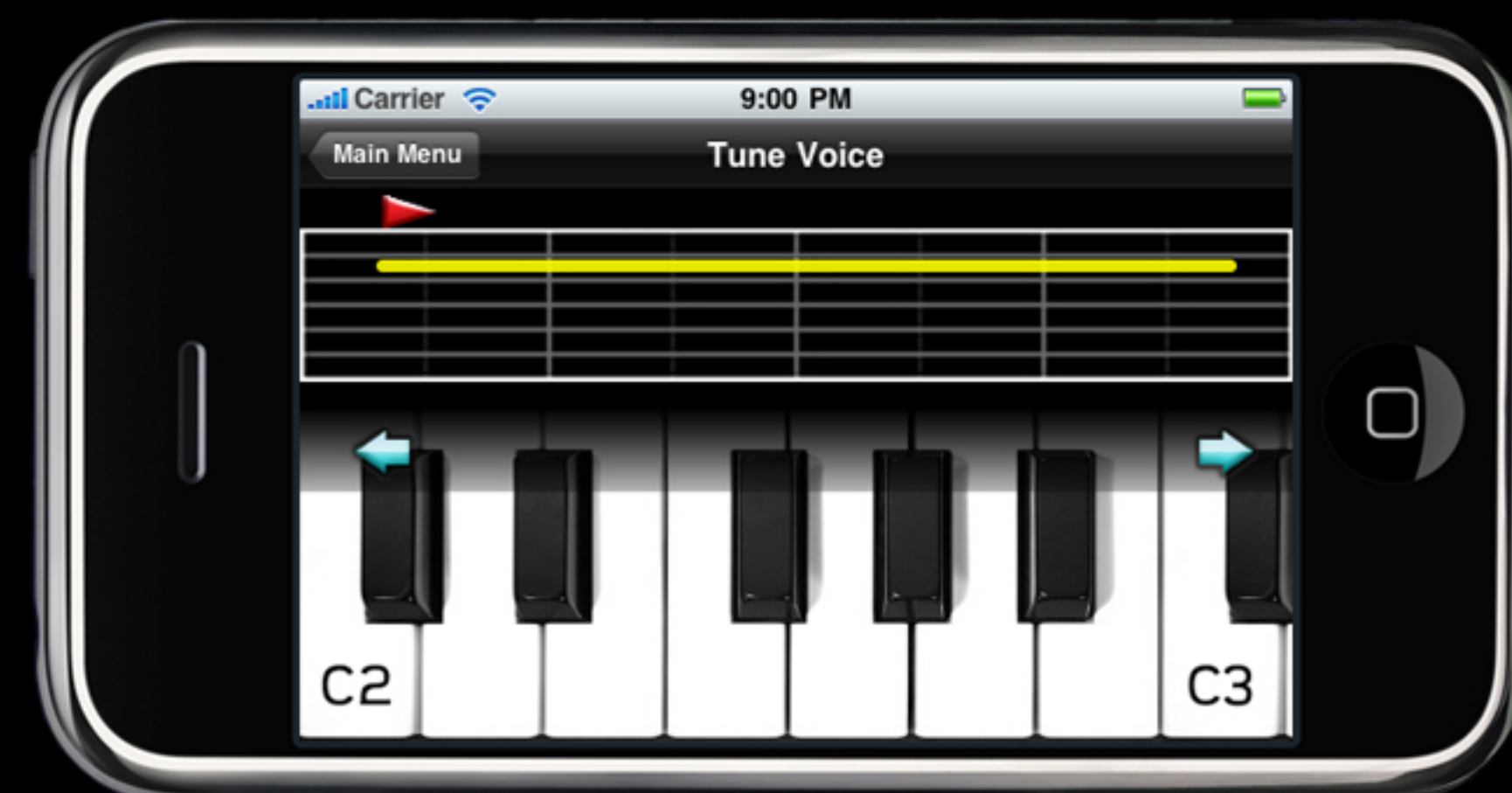
CS 160 Spring 2010  
User Interfaces

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## Problem

Most singers perform in groups such as bands or choirs, but spend a large amount of time practicing individually. However, **individual practice lacks the live feedback, harmonies, and instrumental accompaniment** provided by other members during group practice, and is often limited by the need for non-portable equipment such as a piano.

Our goal is to **allow singers greater freedom in how, when, and where they practice**, and to make individual practice just as effective as group practice.



Tune voice eliminates the need for a full-size piano with a **four-octave range simulated piano** integrated with **real-time pitch feedback** to help singers hit the right notes.

Practice Singing plays through a song with **scrolling visuals, multiple audio tracks, and customizable settings**. Real-time pitch logging lets singers review their performance.



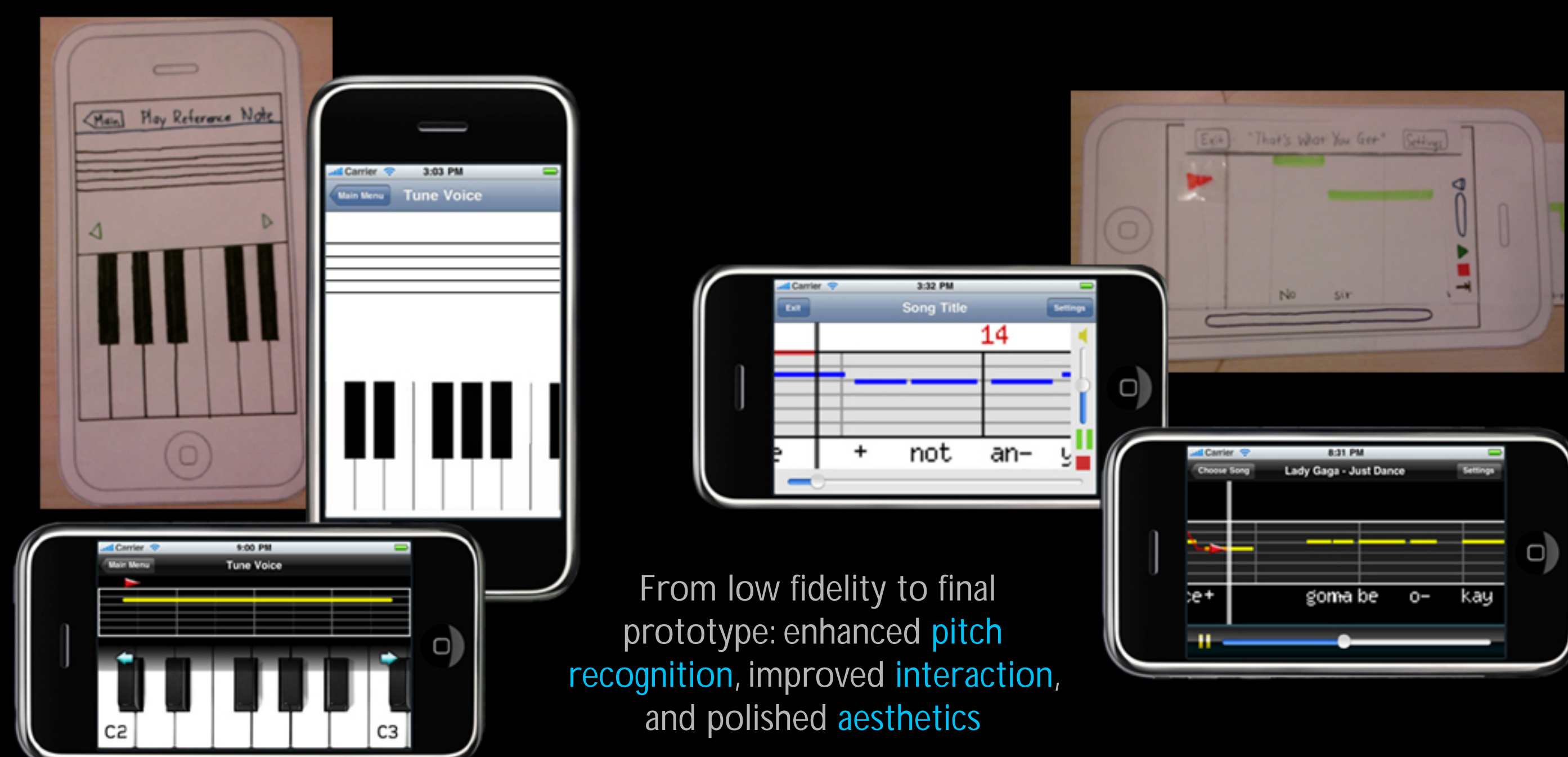
## Solution

Modern Singing changes the way singers practice by providing tools that **bridge the gap between group practice and individual practice**, all in a single mobile application that is easy to use anytime, anywhere.

With this application, singers can **hear and tune to specific pitches** without needing a real piano, and can import audio and lyrics for any song they want to sing. Support for multiple customizable audio tracks allows singers to **simulate any combination of harmony and instrumentals** they wish. Combined with real-time visual pitch feedback, these features give singers a complete, portable solution to individual practice.

## Design Evolution

Modern Singing started out as a vision for an iPhone application to help singers practice, and after observing and talking to real singers, we developed a low fidelity prototype with the main features they wanted: a simulated piano and a song playback mode with pitch feedback. Over the course of refining our design and feature set from low fidelity to final prototype, we **incorporated feedback from our target users** to implement new features and revise the interface, creating an application that is both functional and easy to use.



From low fidelity to final prototype: enhanced **pitch recognition**, improved **interaction**, and polished **aesthetics**

## Target User Group

Modern Singing is made for singers who want to **optimize the time they spend practicing songs**. Especially for singers who perform in groups with other singers or instrumentalists, this application will enhance individual practice time by simulating resources they would normally only have when their group members are present.



Rehearse lets singers **save recordings** of their own singing along with **customizable, performance-style audio playback** with no visual note or lyric references.

## Final Prototype

The final prototype of our application supports three main functions: Tune Voice, Practice Singing, and Rehearse.

**Tune Voice** combines a playable piano keyboard with a screen showing the note played and the singer's pitch from the microphone so he can see what note he's singing relative to the one played.

**Practice Singing** features a scrolling view of notes and lyrics for the currently selected song, along with an arrow indicating the singer's pitch. Pitch is recorded directly on the screen so the singer can review his performance by simply looking back at a previous section of the song. Each audio track can be independently turned off or adjusted for volume.

**Rehearse** lets the singer sing through, record, and save recordings for any song, with custom audio settings. The song is played back in performance style with no visual notes or lyrics.