

The Team

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Problem and Solution Overview

Music collaboration is easy: just get a couple instruments, sit in a circle, and jam. But what if you only have your phones? Despite the great advances both in Electronic music marking and in Mobile technology, to date there's no platform for collaboratively creating music using only mobile devices. Enter Lovestep - an intuitive, yet powerful, App, that allows users to record, mix and share their tunes in real time, giving them the feeling of an actual jam session.

UI Exploration and choice

We've explored two "high level" UI designs, differing in how they represent each recorded sound bite. The original design showed them as a waveforms with an associated number of beats, while the second design showed each loop as an actual circle or semi-circle, depending on its length compared to the longest segment.

Eventually, we preferred the second design – the wavelets didn't provide any useful information and tended to clutter the screen, while the colored loops could be layered, to serve as clear visual clues about the length and instrument of each circle. Furthermore, by adding a pointer that circled the

Design 2: Color Loops **Design 1: Waveforms** ●●●○○ AT&T 令 9:41 AM **¾ 42%** ■ lovestep drums < edit kick bass snare hat send

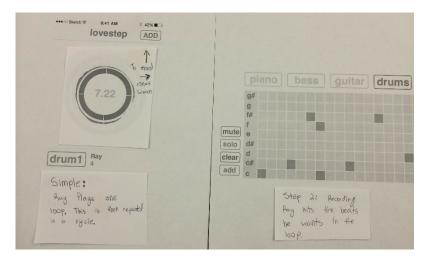
∦ 42% ■ → ADD lovestep drum1 piano1 Joseph bass1

display during replay, the application shows the user what segment is being played and how fast. It's functionality is shown in the following table:

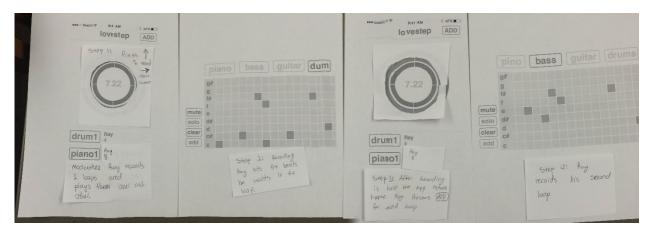
Function	Implementation
Show all segments that make	A layered display of concentric circles, with a colored "legend" below
up a track	
Illustrate the different length	The segments are all compared against the longest one. In the above
of each segment	example, the blue piano1 segment is 4 times as long as the bass1
	segment and 2 times as long as drum1.
Record new loops	Done using a step sequencer, shown below under "UI storyboard"
Play the recorded track	The pointer (orange) circles the layered display during playing and
	help visualize what segments are playing every moment

Main Use Scenarios:

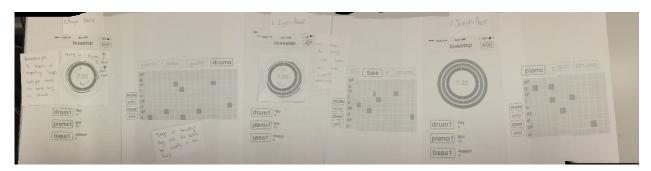
Basic: User record a single loop using a step sequencer:



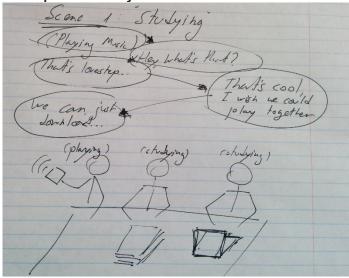
Advanced: User mixes two loops from different instruments:

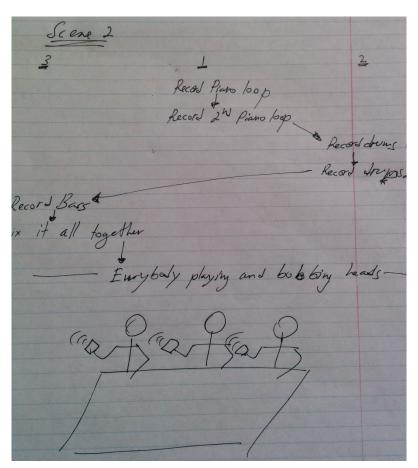


Master: Three users collaborating to creating a single track.



Concept Video Storyboard





Concept Video Description

We wanted our video to highlight exactly how easy it is to learn and enjoy Lovestep. Our idea was to show a relatable scene in which target users discover the application and make good collaborative music. Special attention was paid to creating a song that both sounds good and could realistically be made with the Lovestep application.

Planning: The design process of the video began with an initial 2 hour meeting in which we discussed exactly what concepts we wanted our video to illustrate. After coming to an agreement, we then created a rough initial storyboard.

Music: We needed a good "Lovestep" song for the video, and thanks to George's superb and speedy musical production skills, that stage of the process only took two hours.

Filming: Shooting the video took two and a half hours. Multiple takes were necessary before we came to shots we were satisfied with, and setting up simple shots took more time than expected.

Editing: Editing took four hours. Splicing video clips was fairly simple, but further postproduction was a bit more complicated.

Difficulties

We had trouble actually shooting the video. None of us are very good actors, and it took us multiple tries to even get our very simple lines out. We also took a good bit of time rearranging the angles of the shots until we found something that we thought was interesting enough. Postproduction involved some tricky synchronization of audio because the camera did not have a microphone.

Successes

Despite our difficulties, we are all very happy with how the final product turned out. Our team worked together well, and we are especially proud of the Lovestep song.