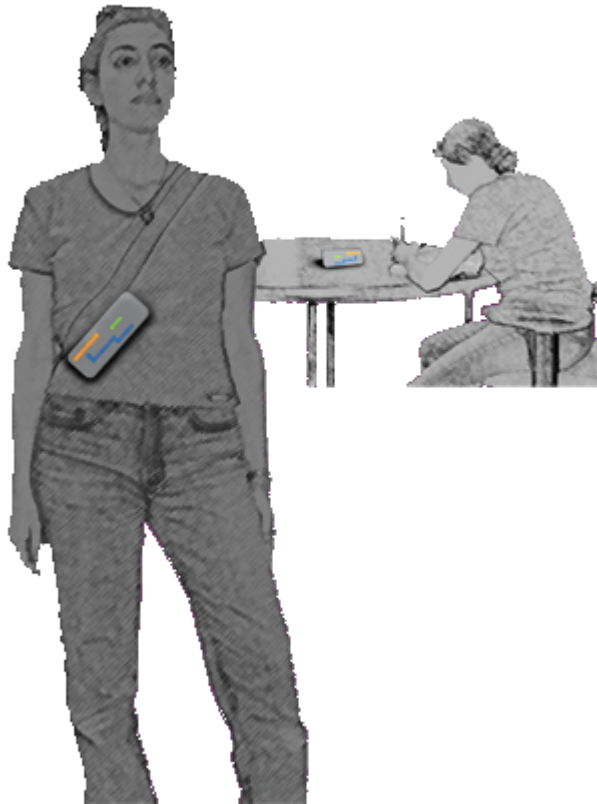


Fashion Phone

Karrie Karahalios

People use clothing to express how they want to be perceived. Like fashion, this interface is a presentation of self within a community.



Fashion Phone is a wearable interface that visualizes how the wearer interacts/ appears with his or her community.

In this case, the visualization is of group audio interaction.

Ideally, the interface would be an article of clothing such as a shirt, a wig, or a hat.

We are currently implementing on a Nokia 6600 cell phone to experiment with visualizations.

Fashion Phone

The main idea is to create a wearable phone that represents your current setting in your conversational community. Like fashion, it is a presentation of self, hence, Fashion Phone (or perhaps FashionFone, but the name is not the interesting part at the moment).

Imagine a 24 hour connection device. You connect with friends, family members. You mingle, listen, come and go from the conversation space.

The main issues I plan to investigate are:

- behavior modification - how will people change their interaction patterns when they become apparent relative to every ones
- mimicry - there is a lot of mimicry theory in face to face speech interaction and body language. Will we see that here?
- visualization *trends* - will there become conversation fashion patterns that users will want to display.

In creating this interface, we are combining interaction with play, which in many ways is everyday interaction.

First Sketch Design

The idea here is that each user is represented by a series of sequential units that are a distinct hue. The movement of the sequence is reminiscent of the arcade game 'centipede' and the game 'snake'. To the right, there are two users connected.



The behavior of these snakes is influenced by parameters in the audio at each end of the connection.

The we are using are:

- snake length
- snake speed
- direction
- proximity
- bead unit size

The parameters that I am extracting from the audio are:

- volume
- pitch

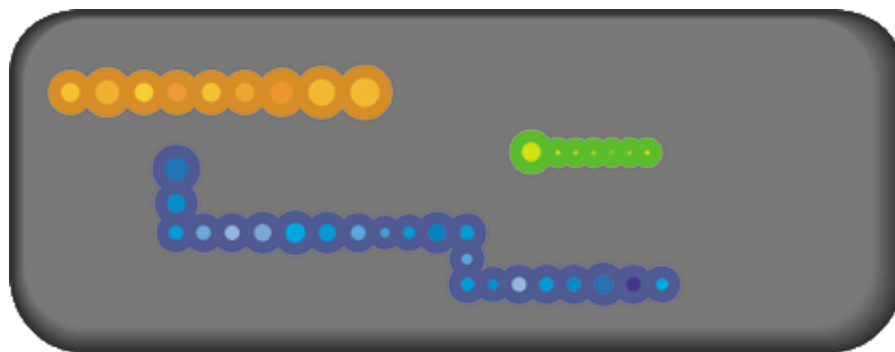
The goal is to see what combination of the extracted parameters and visual parameters show interesting, simple, and clear patterns.

The first iteration maps pitch to the speed of the snake. This is because of the two extracted audio features, real time pitch tracking is difficult to do with high accuracy, so it would be interesting to see relative non-exact changes.

Direction will be random. When there are moments that the parameters from two snakes are similar, they will near towards each other. The idea here is that if there is similar pitch and volume, maybe they are talking to each other, are in similar locations, etc.... (is this an indication of mimicry? - I want to find out!)

The bead unit size will reflect the volume of the conversation. The head bead will be instantaneous audio whereas the following beads will record a short history.

The length of the snake reflects participation in the connection for now. I am a little confused with this one and by the meaning of the word participation



Background

I am a new assistant professor in the computer science department at the University of Illinois in Urbana-Champaign.

My work has focused on the interaction between people and the social cues they perceive in networked electronic spaces. Of particular interest are interfaces for public online and physical gathering spaces such as chatrooms, cafes, parks, etc. The goal is to create interfaces that enable users to perceive conversational patterns that are present, but not obvious, in traditional communication interfaces.

My Ph.D. research involved integrating social catalysts into the design of interfaces for connecting spaces using audio and video.

My current research investigates using learning algorithms to create intelligent visualizations of audio conversation streams.

Previous projects include: Visiphone, a communication object that visualizes conversation patterns between two spaces; Hear&Here, an augmented reality interface for placing sound envelopes in space and retrieving them with an audio interface; Chit Chat Club, a hybrid social space that combines the immediacy of the traditional cafe with the global reach and easy introductions of an online chat.

I have completed a S.B. in electrical engineering, an M.Eng. in electrical engineering and computer science, an S.M. in media arts and science and a Ph.D in media arts and science at MIT.

My interest in this workshop stems from using conversation visualizations as snapshots of identity — in this case, visualizing group conversations patterns and seeing where the user exists in this landscape.

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