

AD508 -- Fall 2008 – Arunan Rabindran

Visual Caffeine

Description

The plan

I plan to install an interactive screen in our neighboring Starbucks and allow users to connect to it using their Gphones. Once they connect they can start interacting with the display, which would be a game using the movements of the phone.

The idea

The idea is to create an aesthetically appealing game using the energies users impart to their phone by moving and shaking it. Simple shapes representing the user's choice would be used to represent the users' movements.

The Users

They can choose to be one of the four shapes: circle, square, triangle or squiggle. Once they choose their shape, they're ready to start playing in the main screen. The users' movements are recorded and transmitted to the central display and translated into coffee particles filling up the cup. The user who fills the cup first gets the free coffee.

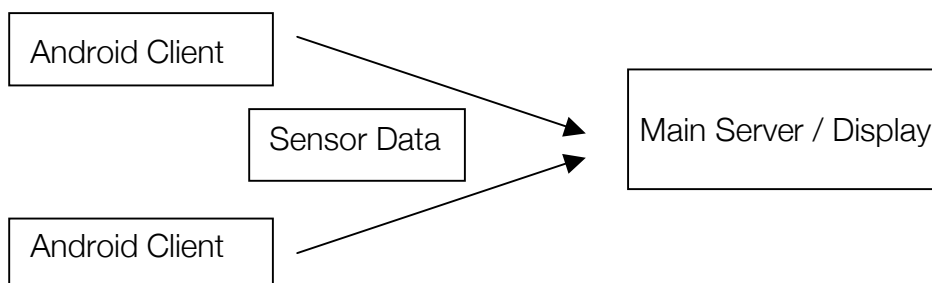
The Display

A particle system of the shapes is generated according to the users' movements of the phone as seen by the accelerometer built into the phone. There is a background landscape made entirely out of coffee based images.

Equipment

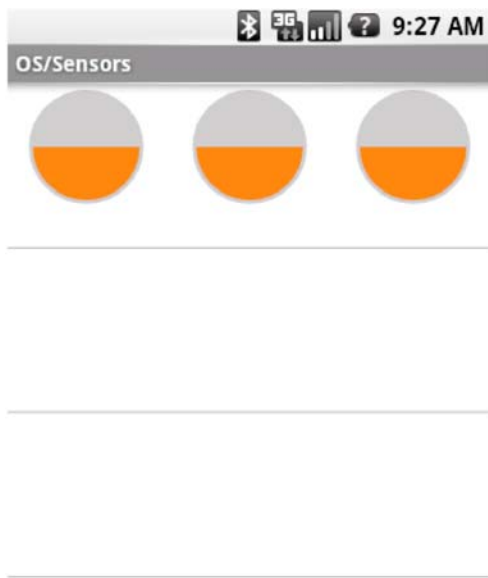
1. An android GPhone
2. A PC with internet connection
3. Decent bandwidth with dedicated internet connection
4. Custom Server Software for the PC and Client Software for the Phone

Working

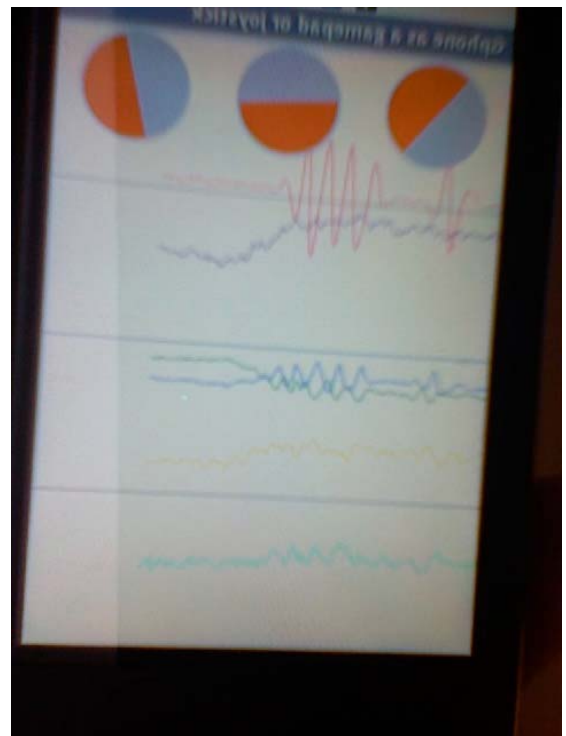


The Main Server picks up the sensor data through a TCP/IP connection and runs the processing code which is based on the following multiple particle systems code modified with the four coffee cups and constrained based on the movements of the users.

Images



Android Sensor Example



Application ported to my phone

Data from the sensors is transferred over wi-fi to the server. Based on the constraints of the movements programmed in the coffee fills up the respective cups. The player needs to apply the correct force in the correct directions as prompted. If more force is applied or less force is applied, the amount of coffee that fills up is affected.

Server – User Interface



mock-up with four players playing the game