Multiplayer Pacman

Distributed Systems – Project Proposal

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ABSTRACT

(a) System overview *(b)* software and hardware you intend to use in this project, *(c)* expected deliveries of this project.
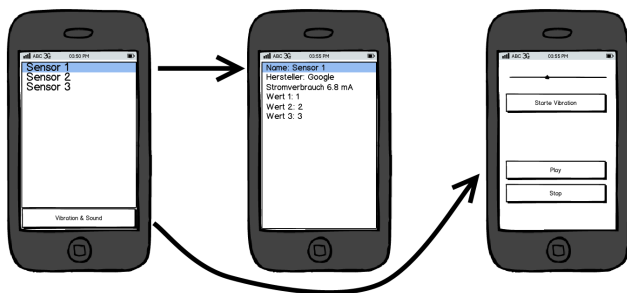
1. INTRODUCTION

2. SYSTEM OVERVIEW

Figure 1: Only include useful figures. Do not simply copy something from a Web.

3. REQUIREMENTS

1. The game can be played on multiple Android devices.

2. The gameplay should work as follows:

   (a) Coins are distributed evenly on the game map (board).

   (b) One player plays as PacMan

   (c) One or multiple other players play as ghosts

   (d) PacMan wins, if he collects all coins on the map

   (e) The ghosts win, if they capture PacMan (simply modeled by collision).

3. Each player must use one Android device in order to control his figure (PacMan or ghost)

4. The map (board) on which the players move should provide the following features:

   (a) PacMan starts on a predefined location (PacMan spawn)

   (b) The ghosts (one ore multiple) start on predefined locations (ghost spawns)

   (c) Player figures can only move up, down, left and right.

   (d) The map is shaped like a maze. ??? [NOT PRECISE ENOUGH]

   (e) The only structuring elements of the map are walls.

5. The protocol used for Device-to-Device communication will will be implemented atop UDP, TCP or a higher-level protocol [???]

6. The app will be optimized for Android version [???] and run on Android version [???] and higher. [???]

7. The player who hosts the game will also play as Pac-Man.

8. On the hosting player's device, a server task will be started that clients can connect to.

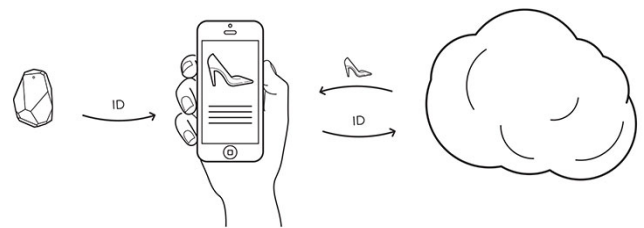9. The players that connect to a hosted game play as ghosts.

The Project

Figure 2: System Overview [1]

4. WORK PACKAGES

- **WP1**: XYZ . . .

- **WP2**: Set and Configuring Backend Serve . . .

- **WP3**: Integration . . .

- **WPx**: . . .

Stick to a concise, scientific writing style.

5. MILESTONES

6. REFERENCES

[1] Estimote. `http://estimote.com/`. Accessed on 26 Oct 2015.

[2] Services: Sending Notifications to the User. `http://developer.android.com/guide/components/services.html#Notifications`. Accessed on 29 Aug 2013.

[3] E. Burnette. *Hello, Android: introducing Google's mobile development platform.* Pragmatic Bookshelf, 3 edition, 2010.

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    L. Masinter, P. Leach, and T. Berners-Lee. Hypertext
    Transfer Protocol – HTTP/1.1. RFC 2616, 1999.

[5] R. T. Fielding. *Architectural Styles and the Design of
    Network-based Software Architectures*. Phd thesis, UC
    Irvine, 2000.