CS 477a Project Proposal: Mobile Transit Passes

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1 Proposed Project Name

Project RAP (Rapid Access Pass)

2 Organisation Name

Mobile Ticketing Technologies

3 Project Goals

1. To create new and innovative transport technologies
2. To improve the efficiency of purchasing public transport tickets
3. To reduce the barriers to public transit systems

4 Current Systems

4.1 System Names

The current available systems include TAP[1] and Clipper[2] cards.

4.2 Implementations

Current systems are implemented as tickets on plastic 'smart cards', combined with RFID or NFC technologies.

[1] `http://www.taptogo.net/`
[2] `http://www.clippercard.net/`

4.3 Issues

The cards are inconvenient to carry around and not very efficient. Today's technologies are moving towards mobile, which would be more cost-effective for businesses and more attractive to customers.

5 Proposed Alternative System

We propose developing an ecosystem of mobile apps and hardware that would support saving of tickets on users' own mobile devices.

5.1 Benefits to clients

1. Mobile passes would be more cost-effective for the transit operators as they would not have to bear the cost of manufacturing smart cards.
2. Transit operators could easily verify that passengers have paid for rides.
3. More convenient for passengers as instead of having to carry an extra card, they can easily use their phone which they would have anyway.

5.2 Key Features

5.2.1 Smartphone application for passengers

1. Displays transit maps and schedules
2. Real-time bus/rail tracking
3. Purchasing tickets and passes

5.2.2 Smartphone application for clients

1. Valid ticketholder verification
2. Notifications to ticketholders

5.3 Specifications

5.3.1 Platform

Native iOS, Android applications as well as a mobile web-interface.

5.3.2 Database

MySQL database to store ticket data.

5.3.3 Languages

Client-side Java, Objective-C, HTML

Server-side PHP

6 Contact

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