



UM-CTI Mobile monitoring system for an ad-hoc transit system.



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Goals

Develop a mobile monitoring system for an ad-hoc transit system. This system will provide mobile device users with accurate location information of vehicles not necessarily adhering to a strict route of transit. We plan to provide this service not only to transit users with handheld mobile devices, but also to businesses known to serve large numbers of transit users with custom built “kiosks”.

PROJECT OVERVIEW

Test Bed

- Rebel Ride, a free transit service from multiple locations around the UM campus to the Oxford square, has agreed to be the test bed for this project. Rebel ride follows a lenient route and only runs during weekends and special events. The ad-hoc nature of Rebel Ride affords it as good candidate for this project.
- Multiple bars and restaurants located on the Oxford Square will be recruited as test locations for accommodating the kiosks.

Target Equipment

- **General User** - Android powered handheld devices.
- **Transit Vehicle** - Android powered handheld devices.
- **Kiosks** - Android powered Motorola Xoom.

Software

Three separate Android applications will be developed.

- **Application 1(General User)** This application will display a map with the current location of the transit vehicle(s) and its estimated time of arrival to predetermined locations. This application will be made available to the general public.
- **Application 2(Transit Vehicle)** This application will be used to transmit the location of the transit vehicle.
- **Application 3(Kiosks)** This application will be used on the kiosks and will display a map with the location of the transit vehicle(s) and the estimated time of arrival to the kiosks location.

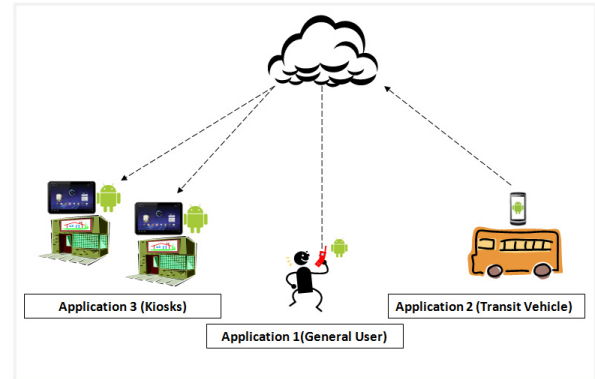


Figure 1: Android Application Model

TASK

Spring 2011

- Preliminary research and requirement gathering. **(Current Task)**
- Research and pre-development of Android Applications. **(Current Task)**

Summer 2011

- Android application development and pre-testing.

Fall 2011

- Determine candidate locations for kiosks.
- Testing.

POSSIBLE ADDITIONS

- Implement a pickup request system.
- Implement an advertisement system on the handheld and/or kiosk applications.

Collaborators

Cellular South

University of Mississippi, Department of Computer Science.

Contact Information

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