



UCMobile Student Contest

Technical Overview

Last Update 5/8/07

Introduction

Purpose

The purpose of this document is to provide an overview for faculty members to assist with making a decision regarding contest participation. It is worth noting that this is a working document subject to change given faculty feedback. The narrative provides an outline of the competition and any associated technical constraints.

Quick References

- <http://www.uc.edu/ucmobile/>
 - Overview of UCMobile plan, options and how to guides of existing applications
- <http://ucm.uc.edu>
 - Path to applications from UCMobile phones

Overview of Competition

The UC Mobile Student Application Development Competition is designed to integrate with College curriculum within Applied Science, Computer Science or School of Business. The goal of the competition is to come up with an innovative mobile application for students that are delivered over the University's UC Mobile infrastructure and in partnership with Cincinnati Bell, Cisco Systems and Microsoft. Your idea is entirely up to you, but it should add functionality beyond what UC Mobile cell phones can already do. The following is a list of ideas generated from student input in May 2007:

List Idea Awards

The competition will be divided into two phases. All students within the respective classes will participate in the initial application design brief phase. The design brief should be professional and clearly communicate the teams' application idea. Only 10 teams will be selected to participate in the application development phase. This phase will require any team to deliver a fully functional application. In addition to the prizes listed (see Official Rules section) students will receive course credit from their respective College. Individual professors will help determine the exact requirements for their course.

Key dates – Keep these in mind

Phase	Date
Phase 1 Begins – Design Briefs	September 19, 2007
Phase 1 Ends – Design Briefs Due	November 28, 2007
Phase 2 Contestants Announced	December 6, 2007



Phase 2 Begins – Application Development	January 2, 2008
Phase 2 Ends – Applications Due	March 5, 2008
Prize Winners Announced	March 13, 2008

Official Rules

Phase 1 – Application Design Brief

Students will group in teams of 3-4 members, with no more than 4 members to a team. The competition will be administered in two phases. The scope for phase 1 of the competition is for each team to create an application design brief. The design brief should be comprehensive and clearly convey the concept of the application. It should provide an overview, high level requirements, actors, use case, user interface design, application component behaviors and resource estimate (development hours). See Appendix A for an example of a design brief.

The phase 1 project requirements for each team are the following:

- Design briefs must be limited to a maximum of twenty (20) pages using 12 pt. font.
- Respond via email to any design brief questions from the judges with 24 hours.

Teams will be judged and ten (10) teams will be selected to participate in phase 2 of the competition.

Phase 2 – Application Development

Each team selected to participate in phase 2 will receive a presentation overview (coordinated in two sessions) of the technical architecture being provided as the development lab.

Teams will submit their project name and team members that will need access to the development sandbox via a location to be determined.

The development sandbox will be used for each team to develop and test their applications. This will include a file directory that will be the 'Virtual Directory' in IIS. A publicly available web site will also be created for testing on devices or via pc. This will likely be similar to 'http://ucmc.uc.edu/<project name>'

A database will also be created (if needed) with the same project name. The team will have access to the database for modifications to the table and stored procedures. A user account will be created for application access to the database. This will be set in the web configuration file.

Applications will be able to access the public internet, but internal UC systems will not be accessible.

Each team will receive the following technical support for their project:

- 4 hours of Microsoft software support from NuSoft Solutions a Microsoft Solutions Partner for a senior developer skill set. This support feature may be used for guidance and question and answer only. The senior developer is not available to write application code for any project.

- Define support from Paul Schmidt's area on setting up development sandbox and database. Support also may be needed if there are problems with security or with the development sandbox. How will this support be requested? 6-HELP/email/other?

The phase 2 project requirements for each team are the following:

- A demonstration of a fully functional application via UC Mobile handsets.
- A 5-7 page business case that describes the benefits and deployment of the application in detail.
- Finally, each team must give a 15-20 minute PowerPoint presentation of your project. The presentation should highlight the key functionality of your application, and go over the main points of your business case.

Technical Requirements – Development Server Sandbox

The development server sandbox will support the following requirements

- Software Requirements
 - IIS – Microsoft's Internet Information Server
 - ASP.NET 2.0
 - SQL Server 2005 database
- Hardware Requirements
 - Development Server – Dell PowerEdge 2950
 - Dual-Core Intel Xeon 5100 series processors at up to 3.0GHz
 - 4GB Memory
 - 300GB Hard Disk (Paul Schmidt's area needs to validate this spec!)

Technical Requirements – Student Environment

The PC/laptop used by the student team will need to support the following requirements

- Software Requirements
 - Visual Studio 2005 development environment with latest Service Packs.
 - The installation will detect and install if needed additional components including the .NET Framework 2.0 and Internet Explorer Version 6.0 SP 1 or later.
 - C# is the required language for development
 - Optional – Microsoft Visual Studio 2005 SDK (Software Development Kit)
 - Optional – Enterprise Library for .NET Framework 2.0
- Hardware Requirements
 - For detailed Microsoft Visual Studio requirements click [here](#)
 - Recommended to have
 - At least P3 1GHz processor
 - At least 500MB to 1GB of RAM
 - At least 2GB of hard disk space free
 - At least Operating system XP SP2 Professional (not Home)



Technical Requirements – UCMobile User Platform

All of the available phones for UCMobile will need to be supported for the application. Each team will receive one each of the following devices with a quarterly subscription plan for testing purposes only.

- Nokia phones such as the 6030
- Motorola phones such as the RAZR
- Blackberry phones such as the 7100g
- Windows Mobile phones such as the HTC PPC4300

Quality Assurance & Application Load Testing

Teams will be able to schedule times that they will be able to perform load testing against the UCMobile Server Sandbox to see how the solution handles high volumes of users.

List the quality assurance tools being made available to each team.

The Microsoft Web Application Stress (WAS) Tool will be used to conduct the testing.

Guidelines for Determining Contest Winners

Entries will be judged by a panel of seven members with representatives from UC, Microsoft, Cisco Systems and Cincinnati Bell. Applications will be judged based upon the following criteria:

- Creativity
 - Innovation of Idea
 - Innovative use of technology
 - Revenue generation
- Expected Impact to Student Body
- Usability of the Application
 - Utilization of user interface
 - Is functionality intuitive
 - Minimize 'clicks' and typing of user
- Technical Review
 - Code Architecture and Review
 - Database Design/Performance (if applicable)
 - Actual versus estimated development hours
- Quality Assurance of Solution
 - Do bugs exist
 - Can the solution handle high volume of student usage
 - Integration with UC Mobile handsets
- Security

Prizes

Taxes on all prizes, if any, are the sole responsibility of the prize winners.

By accepting prizes, winners agree to release and hold harmless the University of Cincinnati and any of the contest sponsors, its subsidiaries, affiliates, and related companies and each of their respective officers, directors, employees, and agents from any and all liability, loss, or damage of any kind arising out of or in connection with



winners' participation in this Contest, or with respect to awarding, receipt, possession, use, and/or misuse of any prize, or participation in the Contest, or in prize-related activities.

BY ACCEPTING PRIZES, WINNERS EXPRESSLY ACKNOWLEDGE THAT THE CONTEST PARTIES HAVE NEITHER MADE, NOR ARE IN ANY MANNER RESPONSIBLE OR LIABLE FOR ANY WARRANTY, REPRESENTATION OR GUARANTEE, EXPRESS OR IMPLIED, IN FACT OR IN LAW, RELATIVE TO PRIZE.

Except where prohibited by applicable law, by accepting prize, winners consent to the use of their name, likeness, and biographical information for advertising and promotional purposes worldwide without limitations and without additional compensation.

Cisco, MS and Cincinnati Bell need to fill in prize details.

Intellectual Property

Intellectual property is any form of knowledge or expression that is a product of the mind. It includes such things as inventions, computer software, trademarks, literary, artistic, musical, dramatic or visual works, compilations of useful information, semiconductor circuit design, and even simple know-how. Inventions may be protected by patent and registered industrial design. Software, literary, artistic and musical works may be protected by copyright. ALL RULES GOVERNING INTELLECTUAL PROPERTY AT THE UNIVERSITY OF CINCINNATI ARE APPLICABLE TO THIS CONTEST. [Application of University Patent & Copyright Policies to Students](#)

This language needs to be validated by legal.