Trojan Explorer

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ICampus ✓ IWatch CT

Introduction

• A promotional mobile game app to introduce the points of interests at USC with games and quizzes. Also to educate users simple facts about USC
• Promote IMSC and its iCampus project through the game
• Educational mobile programming project for undergraduate students: CS and EE

Inspiration

• Location-based service (LBS) is getting more important
• Mobile programming (smartphone) is getting more essential
• Geo and social games are the fastest growing segment of the gaming market
• Need to define a good educational mobile programming project utilizing mobile phone's advanced features

Programming Highlights

• Sensor data collection (GPS)
• Google map interface
• Real-time database connectivity (iCampus server)
• Continuous proximity checking between current user location and preset points of interests
• Periodic trajectory recording w/ minimal power consumption
• Smartphone game design and development
• Graphical User Interface (GUI) design
• Threads control to reduce CPU cycle and memory usage

Description of Game

• Points of interests are marked on USC campus map (Google map)
• Participants are supposed to physically visit the target points and solve the quizzes or play the games. Before starting the game, user can plan their strategies to finish the game as fast as possible
• If you solve the quizzes or played the game the icon will change the appearances, and appropriate score will be awarded
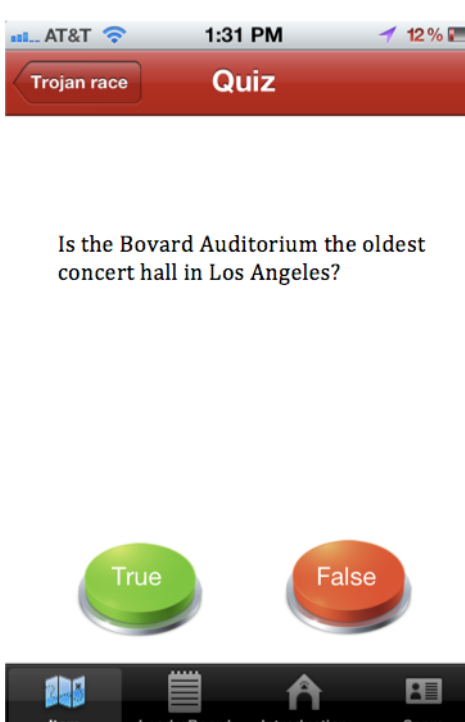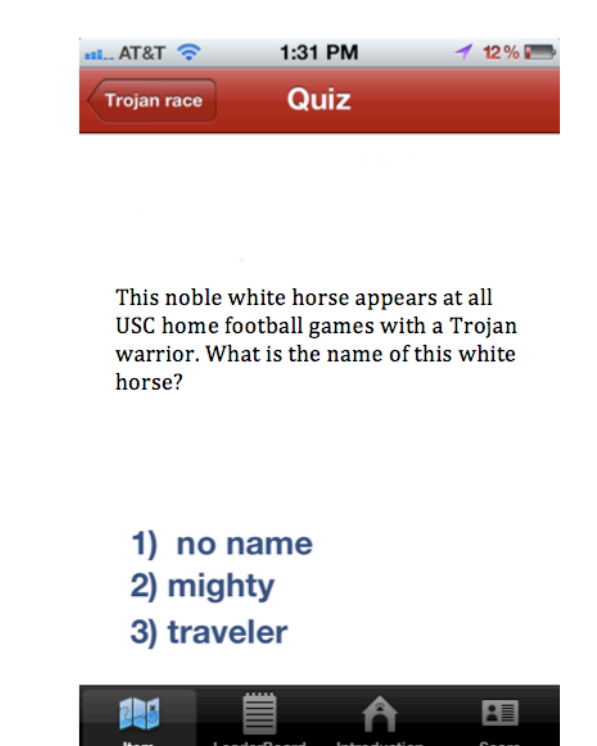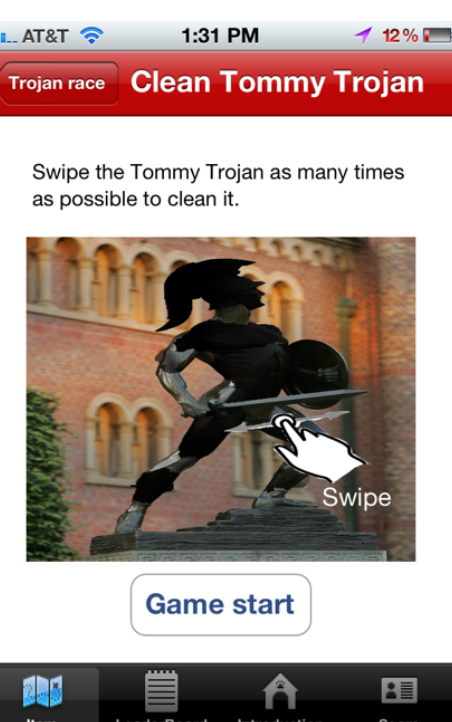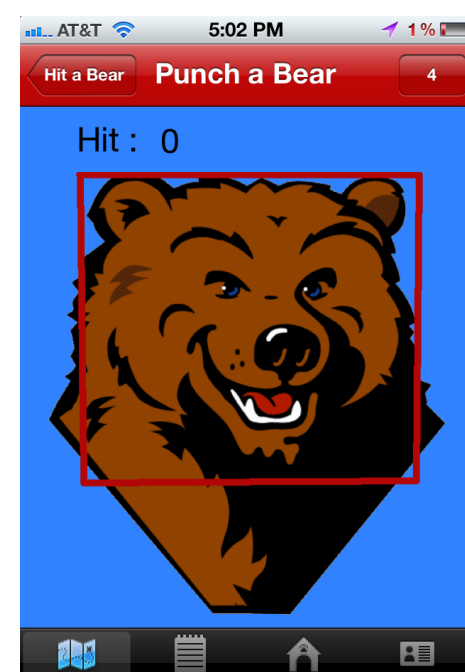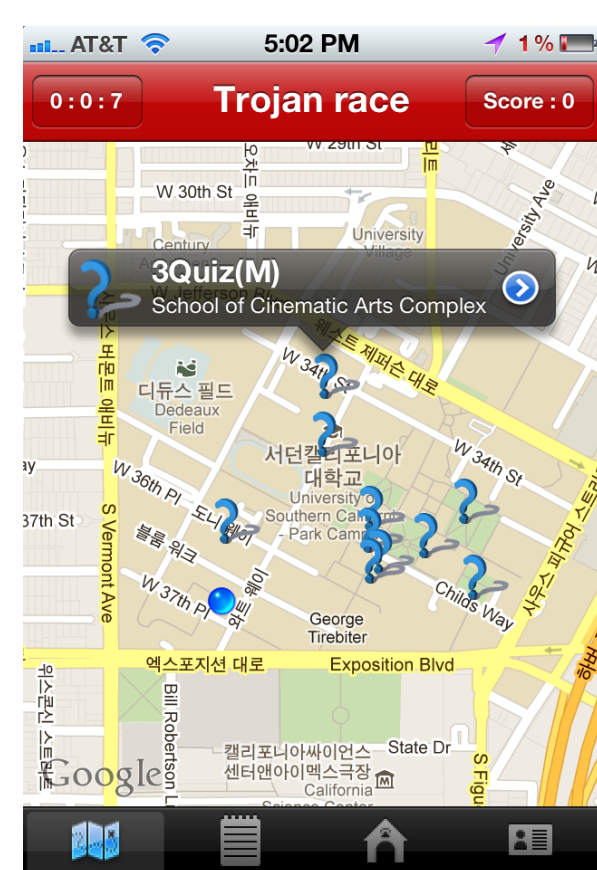
Experiments

• 3 games and 6 quizzes were positioned across USC campus
• 20 students (10 teams) were competing at the same time
• Individual score and trajectory were recorded and analyzed
• User survey was collected after the game for qualitative evaluation

Group5

Name : (team34)
Time : 3614
Total score : 268
Start : Thu Feb 16 13:30:00 PST 2012
End : Thu Feb 16 14:22:46 PST 2012

Lessons Learned and Future Work

• Comprehensive mobile programming experience for undergraduate students
• Good reference model for future LBS apps about USC
• Data collection (such as participants' trajectory) for research
• Collect wireless network reliability to improve continuous wireless connection on USC campus

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