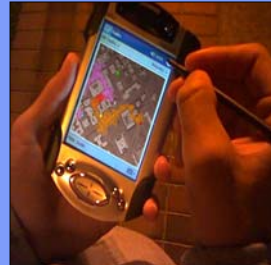




## Research Goal

The goal of the research is to develop a virtual, persistent world that is embedded upon the physical USC campus. USC Students, using PDAs, can walk through the USC campus leaving behind virtual plant life. As each object is dropped, it retains a set of unique behaviors which will interact with other elements in the virtual world. The result will be an emerging, complex series of ecosystems.



## Role in IMSC

This project allows for an exchange of ideas and proficiencies between IMSC and IMD that allow for achievement not previously possible individually. This project focuses on contextualizing the traditional strengths of the Cinema School in the realm of digital media, while bringing an invaluable wealth of experience from the development of immersive technologies at IMSC.

## Uniqueness & Related Work

While much research has been done in the field of Mobile and location-specific media, the chôjô project is unique in it's creation of a persistent virtual world similar in nature to MMORPG, but linked to a physical environment and rich in context specific gameplay and information.

## Accomplishments

Panorama viewable on the PDA,  
 Server to PDA Network libraries  
 Campus Model built  
 Game Engine prototype complete

## Research Approach

Multiplayer game using mobile devices (HP Ipaq 5550) with low power performance

Users have a Bluetooth connection with a wireless TomTom GPS to get their position

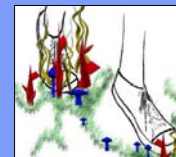
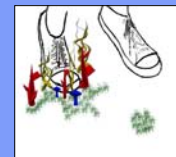
Multithread and transparent network library to connect the server with the PDAs

User interface with two possible windows: global view (2D) and local view (3D)

Users can see all players in the global view which corresponds with the top-view USC map

3D view shows the local environment. For each user, the server renders different points of view and send the images. PDAs receive the images and create a local panoramic view.

The mobile devices have a FlyCam Camera in order to take pictures and share them with other players.



## 5 year plan

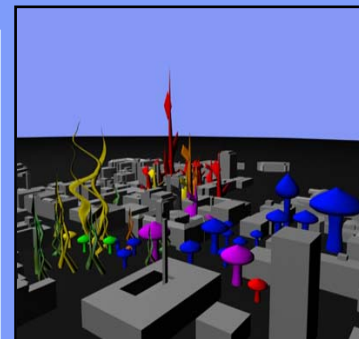
-Having a persistent linked virtual environment on campus will spark many new technical and creative ideas. in 5 years, we envision:

-increased technical scalability

-Expanded content for the system such as new games and information structures

-robust collaborative ability in the virtual world and social connectivity.

- richer, more dynamic graphics



**PROJECT LEADERS:** Scott Fisher, *Chair, Interactive Media Division*  
 Victor LaCour, *Creative Director, IMSC*  
 Suyay You, *Research Assistant Professor, IMSC*

**STUDENTS:** William Carter, *MFA Interactive Media, CNTV*  
 Monica Adjemian, *Undergraduate, CS*  
 Prasanna Joshi, *Masters Student, IMSC*  
 Tripp Millican, *MFA Interactive Media, CNTV*  
 Kurt MacDonald, *MFA Interactive Media, CNTV*  
 Todd Furmanski, *MFA Interactive Media, CNTV*  
 Diego Borro, *Post-Doctorate Fellow, IMSC*  
 Glenn Song, *Masters Student, Engineering*  
 Leo Natanian, *Undergraduate, CS*