



IMSC
Integrated
Media Systems
Center

INTEGRATED MEDIA SYSTEMS CENTER
A National Science Foundation
Engineering Research Center at the
UNIVERSITY OF SOUTHERN CALIFORNIA

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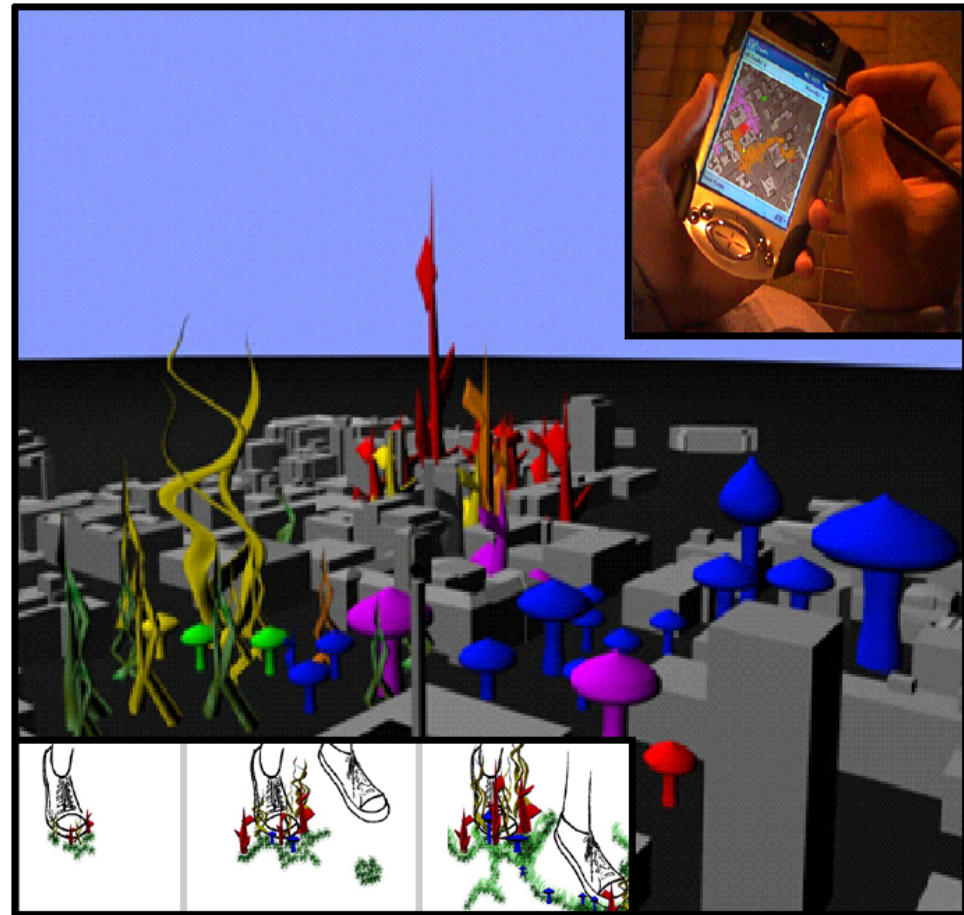
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Simulation Applications: Chôjô: A 3D Virtual USC Campus Mobile Game



BRIEF DESCRIPTION OF TECHNOLOGY DEMONSTRATION

Using mobile devices, students walk through the USC campus leaving behind virtual fragments, represented by small 3D Models, as they walk. These objects exist on a virtual world embedded upon a 3d Model of the USC campus. Mobile users, using PDAs are able to create new objects, and peek inside the space they are helping to develop. As each object is dropped, it retains a set of unique behaviors, and will interact with other elements in the virtual world. The result will be an emerging, complex series of ecosystems that give life to the virtual space and propel users and viewers alike to engage with the world.

UNIQUE OR DISTINGUISHING CHARACTERISTICS RELATIVE TO STATE-OF-THE-ART

- 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.

APPLICATIONS

- Better quality of service in continuous media streaming over the Internet.

RECENT HIGHLIGHTS, LEVEL OF DEVELOPMENT, UPCOMING MILESTONES

- Demo Prototype (August 2004)
- Panorama viewable on the PDA
- Server to PDA Network libraries completed
- Campus Model built
- Game Engine protoype complete

UNDERLYING TECHNOLOGIES

- Using mobile devices (HP Ipaq 5550) with low power performance, a Bluetooth connection and a wireless TomTom GPS
- Multithread and transparent network library to connect the server with the PDAs
- A 3D view shows the local environment. For each user, the server renders different points of view. 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.

LIST OF PUBLICATIONS, REFERENCES, URLs

- <http://interactive.usc.edu/chojo/>
- <http://imsc.usc.edu/research/project/chojo/>

For additional information, please contact the Principal Investigator listed above via email, or contact

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