

# The CASCO Project:

## Investigating Context Aware Support for Cooperative Applications in Ubiquitous Computing Environments

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### ***Context Aware Messaging System***

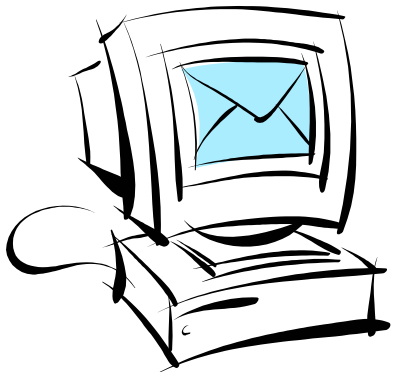
- Provide simple and effective system to facilitate colleague location awareness, and intelligent messaging.
- Context sensitive, public and private, message delivery.
- Designed to run on an embedded device positioned outside an office.

# Simple Scenario

- Public Message 'Out to lunch' visible to all passers-by.
- Persons wishing to use the system docks their iButton.
- Persons recognised as members of the department are allowed to view the time the office was left, and request notification on return by e-mail, ICQ message (etc).
- Persons recognised as colleagues working on the same project are allowed to view more detailed context information e.g. where the person went for lunch, and leave a short text message to be delivered by most effective means e.g. if the user has a mobile phone and has left department then via sms, or leave voice mail.
- If the person in question knows that they will return later than expected, they can update the system with this information by sending a sms message, the public display will be updated, and all interested parties notified through appropriate means.



# Functionality



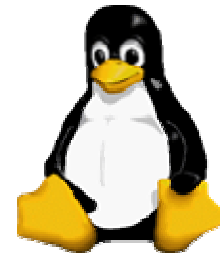
- Voice to speech gateway to eliminate use of on-screen keyboard.
- Integration with e-mail, SMS, MSN messenger, ICQ.
- Video and audio conferencing.
- Integration with other context aware ubiquitous technologies e.g. MediaCup.
- Notification of events e.g. when person returns to office
- Use of iButtons to identify users securely & easily.
- Different user groups with different levels of trust.
- Easy update of context using any client device, mobile device, or on the web.
- Systems' own internal messaging system.
- Possible to provide directions to persons current location.



# Implementation



- System will be implemented in Java 1.4 using Jini for resource discovery, JMF for media streaming and JSAPI for speech.
- User clients will be Compaq iPAQs running SavaJe XE (a native Java OS for StongARM processors).
- Development and server side software will be on Linux.



## CASCO

- Primary objectives to construct a design space for context aware applications, and address the human factors associated with context sharing.
- Involves development and evaluation of prototype context sensitive applications, in addition to theoretical research.
- Context aware messaging system highly useful starting point for the project, and good demonstration of context aware application.