

ecosystem (e-k&-sis-t&m) *n.*

the complex of a community of organisms
and its environment functioning as an
ecological unit

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**THE UNIVERSITY
OF QUEENSLAND**
AUSTRALIA
INFORMATION TECHNOLOGY SERVICES

The University Ecosystem...

**...Or 'presence' and what it
means for you**

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Session Overview...

- What's all this talk about 'presence'?
- The challenges we face – what it means for you.
- Considerations and recommendations.
- Questions?

Quick room survey...

- Question 1

How many of you are 'connected' right now?

- Question 2

If you are... what does 'connected' mean?

The results are in... (well hopefully)

- Traditional GSM telephony
- SMS
- Crackberry or equivalent
- 3G / EDGE / GPRS / CDMA
- 802.11 (ipass, EDUROAM)
- iBurst / UNWIRED
- Something else you aren't telling us about...

How am I 'Connected'?

- GSM mobile phone
- NEC PHS mobile phone *
- Email (10 minute timeout)
- 'Proxied' GSM mobile phone
- SMS
- Microsoft Messenger client
- Microsoft Communicator 2005
- SIP client *

How am I connected?



+



What's all this 'presence' stuff?

- How it used to be done...
 - Voice *used* to be (still is?) the killer app.
 - Phone was left off the hook or rang out
 - Left a message
 - Waited...
 - Then along came email...
- Now, there is an advertised willingness to communicate by a variety of channels.
 - IM, SMS, traditional telephony, SIP, email, VoIP, VIDIIP...
 - how about MS Word?

What's all this 'presence' stuff?

- Fundamental change in the expectations of communication and how we interact.
- Students, colleagues, agents... *'presentities'*
- Like the WWW changed the way we access information, presence is changing the way we are, want to or don't want to be contacted.

What's all this 'presence' stuff?

- Huge array of client devices, applications, protocols and standards.
- Standards? What standards?
 - SIMPLE - SIP for Instant Messaging and Presence Leveraging Extensions
 - XMPP - EXtensible Messaging and Presence Protocol
- Market forces will continue to drive this...
 - Yahoo Chat, MS Messenger, AOL, ICQ, Google Talk, MS Communicator...

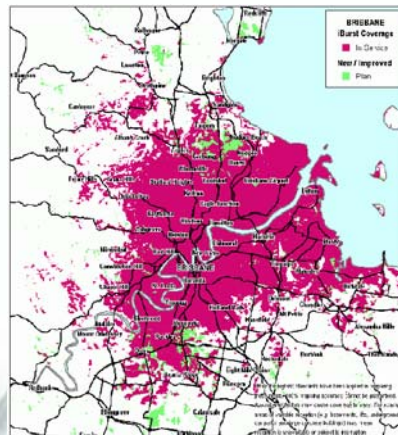
What we are facing...

- **Network infrastructure issues**
 - Coverage, QoS, interoperability
 - Your network was probably not designed for this!
- **Network policy issues**
 - ‘Who’ is connecting?
 - What rights do they have?
 - How can you possibly align policies with usage?
- **Security**
 - Authentication, Authorisation, Non-repudiation are only the beginning...

What we are facing...

- **Impacts on network design and performance**
 - Traditional usage patterns simply *no longer apply*
 - Fat, thin, persistent or otherwise...
 - Firewalls, QoS, redundancy, legislative requirements
- **NO COMMON INFRASTRUCTURE FOR COMMUNICATION**
 - Implies you will be expected to support what everyone else does
 - User/device relationship not only is no longer in place, it is actively and often intentionally abstracted

Is this conducive to presence?



Is *this* conducive to presence?



So far we have only really
talked about presence
being advertised from
mobile devices on wireless
networks

Who is on your network?

- More and more universities are seeing and allowing students and staff to bring their own devices onto campus and therefore onto the network.
- More and more universities are seeing and allowing their students and staff to take the universities devices off campus and therefore onto other networks.
- Why?
- To facilitate presence

What are we facing...

- Enormous security and policy implications
 - Most users regard IM and other presence-capable applications as merely a small distraction from their day to day duties, and have no idea of the security aspects.
 - AOL Instant Messenger, Yahoo Instant Messenger and MSN Messenger have no inherent antivirus/antispam protection or even requirement.
 - Freeware IM and presence clients are the norm.

What are we facing...

- **Absent Authentication** (my personal favourite)
- **Identity Theft**
 - combined with port monitoring, social engineering and malicious code.
- **Information theft**
 - efficient and invisible way to export internal data to the outside world – even if unintentional.
- **Simple social engineering and 'Layer 8' errors.**

What are we facing...

- **How do you mandate who is allowed to advertise and see presence, and how much information you reveal about each user?**
- **User directories - how do you find out which users exist?**
- **User identity - what identifies you as a user?**
- **Additional 'features'**

Recommendations

Observation :

Anyone who uses IM and other presence-capable applications will point out that the most important feature is the ability to interact and communicate with others that they need to – essentially community.

Premise :

Without centralised management of presence services, organisations can't guarantee that all communications are performed in accordance with corporate policies.

Recommendations

Action :

Define a common set of functions that all systems should support.

This should imply feature-rich functionality across all the communities you support, and basic functionality as required to those that are external.

"Instant messaging will surpass e-mail as the business communications tool of choice by late 2006." – Gartner Research

It took six years for e-mail to attract 50 million users, and only two years for IM to achieve that same goal"

Questions?

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