



UQnet

Status and Future Directions

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Overview of the UQ Network

- 3 major campuses, 7 core sites
- Many small sites, including most major hospitals in Brisbane
- 3 Tier network – core/distribution/access
- 2 Gigabit core/distribution
- 100Mbps/Gbps to buildings (100 at St Lucia)
- 100 Mbps standard to the desktop
- 18,500 client devices

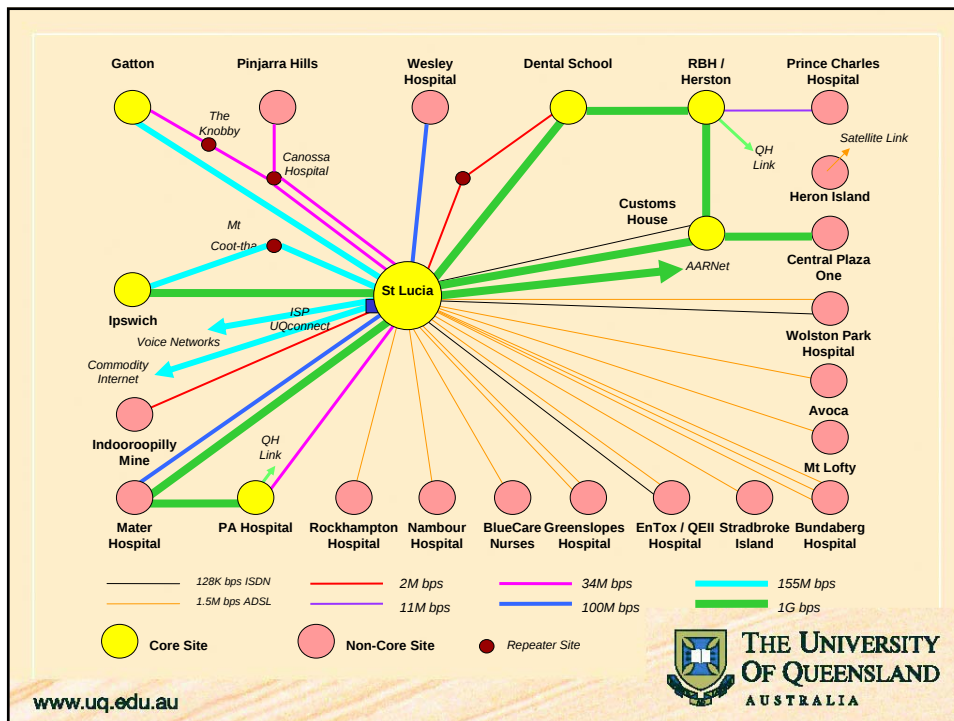
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Overview of the UQ Network

- Mostly Fibre WAN to core sites (1Gbps)
 - Over 300km of fibre, some microwave backup links
- 2 Internet links
 - 1 Gbps link to AARNet for University traffic
 - link to AAPT for commercial traffic (UQconnect)
- Wireless network
 - “tactical coverage”
 - 300+ Cisco APs, BlueSocket authentication
 - 802.11b/g
 - Cisco’s Unified Wireless Architecture

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Network Evolution

- Increased Capacity
 - Gradual migration to a 10Gbps core, Gigabit to the desktop
 - Using WDM to increase WAN capacity
- Expansion of the Wireless network
- Secondary links to Internet providers

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New Directions - Security

- Campus fire-walling via hardware F/W's
- Improved Border fire-walling
- Border Intrusion Protection
- Network Admission Control

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New Directions - Virtualisation

- MPLS IP-VPN + VLAN's
- 802.1x network authentication + dynamic VLAN's
- Segment network into separate "virtual networks" for different University entities
- Correspond to security zones
- Clients login to network, and get assigned to the appropriate virtual network

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New Directions - Wireless

- Currently using Web-based authentication
- Will gradually migrate to 802.1x
- Use meshing to cover outside areas

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New Directions – Data Centres

- Building a secondary/tertiary DC at the Herston site (90 m²)
- Building a new primary DC at St Lucia (670 m²)
- Upgrading the DC at Ipswich to act as a secondary/tertiary DC (160 m²)
- Replacement DC at Gatton

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New Directions – IP Telephony

- High Availability
 - Redundancy of every component beyond the edge switch
- QOS
- Inline power
- First major building serviced with IP Tel by end of this year
- SIP

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