



GrangeNet:

A GRid And Next GEneration Network


www.grangenet.net

*Supported by the Federal Government's
BITS Advanced Networks Program*



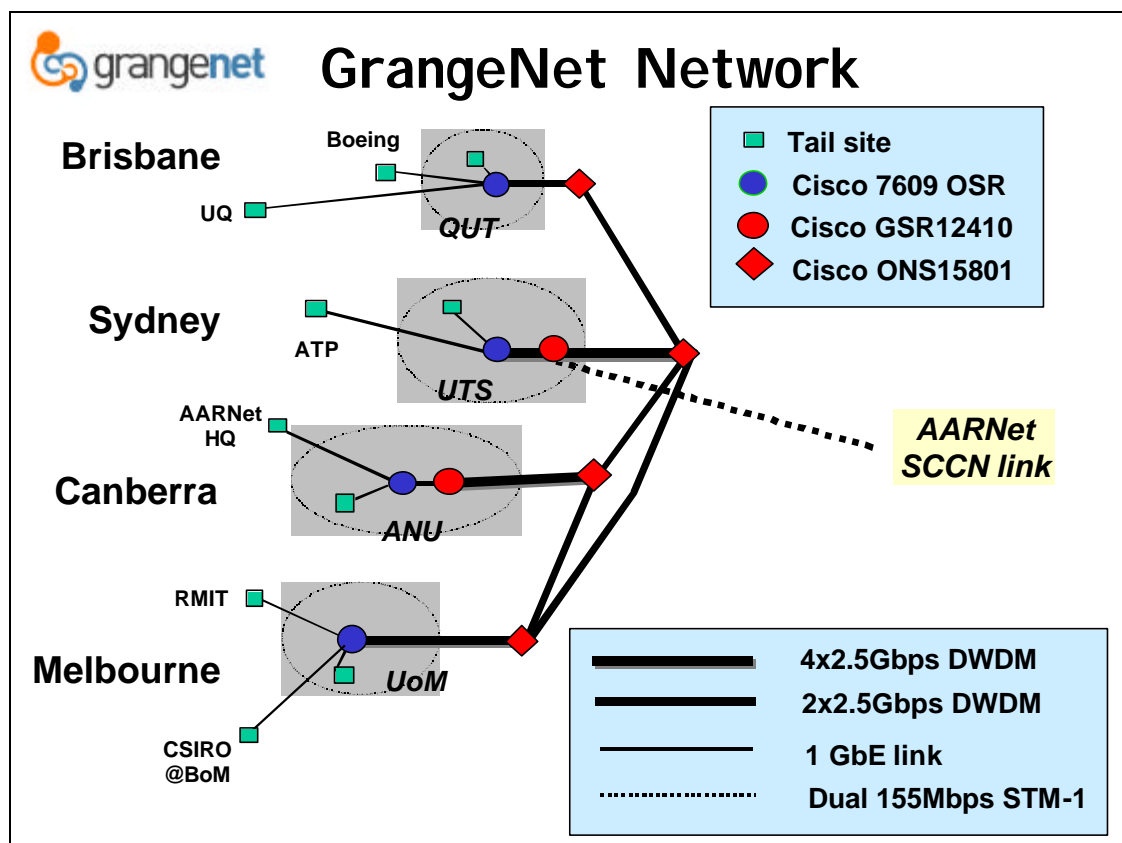
Main Aims

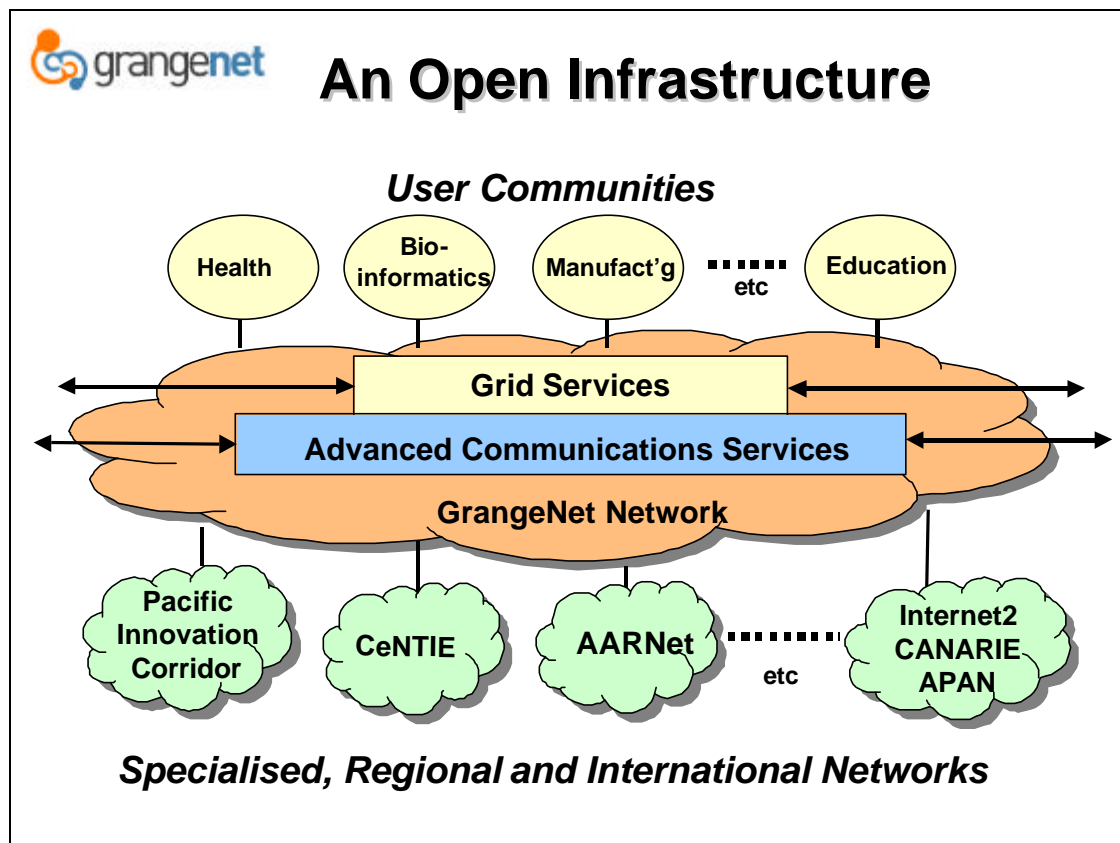
- **Develop next generation of communications networks and Internet services**
- **Provide grid services by integrating high-performance computing and visualisation systems**
- **Support distributed user communities with demanding applications ('virtual organisations')**




Membership

- **Consortium Members:**
 - AARNet, APAC, DSTC, Cisco, PowerTel
- **Participants:**
 - ac3 & Uni Sydney, QPSF, VPAC, ANU, CSIRO
- **International Collaborators:**
 - Canarie, Internet2, APAN,.....
 - HPC Centres in US, Canada, Japan, Singapore
- **Membership open to Clients and Users**
 - Sign GrangeNet Service Agreement (and AUP)






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- ## Advanced Communications Services
- Quality of Service (QoS)
 - Traffic Engineering (MPLS)
 - IP Multicast
 - IPv6
 - *Security*
 - *Access, Authorisation, and Accounting*
 - *Measurement and Monitoring*
 - *Caching and Content Distribution*
- Working Groups being formed under AARNet
Coordinator: John Barlow



Grid Services

- **Distributed Computing**
 - Demonstrate distributed computing applications (Nimrod/G)
 - *install Globus on major computing facilities*
- **Collaborative Visualisation**
 - Connect several Virtual Reality systems for collaboration
 - *engineering design of manufactured products*
 - *bio-molecular modelling and visualisation*
- **Cooperative Environments**
 - Install 5 Access Grid nodes in 4 cities
 - *first one at Sydney VisLab for SC Global 2001*
- **Digital Libraries**
 - Provide access to large-scale international datasets
 - *bio-informatics, astronomy, earthquakes, earth observation*
- **Remote Instruments**

Working Groups being formed under APAC
Coordinator: Markus Buchhorn



User Communities

- **News and Media Distribution (Education)**
- **Computational Chemistry and Biology**
- **High-Energy Physics**
- **Astronomy and Astrophysics**
- **Bio-informatics**
- **Environmental Modelling**
- **On-line Health**
- **Film and Media**
- **Manufacturing**

Contacts and mailing lists being established



Status

- **Program started on 1 March 2002**
- **Backbone network installed by October 2002**
- **All tails completed by early 2003**
- **Demonstrations to February 2004**
 - advanced communications services
 - grid services

Register your interest now
www.grangenet.net



Summary

- **An Australian backbone in 2002**
 - multi-Gigabit DWDM network
 - increased capacity to international R&E networks
- **GrangeNet is developing advanced communications and grid services for a range of user communities**
- **GrangeNet is strengthening international collaboration on R&E networks**

