



BeSTGRID

www.bestgrid.org



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TEC IDF Fund

Funded by



Hosted by



TEC *“Innovation and Development Fund”*

BeSTGRID planning began over 3 years ago
Broadband enabled Science and Technology GRID
\$2.5million: Sep 2006 – March 2008



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BeSTGRID Underlying Strategies

... is a Pilot

BeSTGRID will enhance e-Research capability in New Zealand by providing the **skill base** to help the various research disciplines engage with new eResearch services

BeSTGRID will also kick start **centralised infrastructure** with some capital investment at key institutions



BeSTGRID Underlying Strategies

Demonstrate – lead by example – get “early runs on the board”

- Application focused
- Don't over-engineer the IT

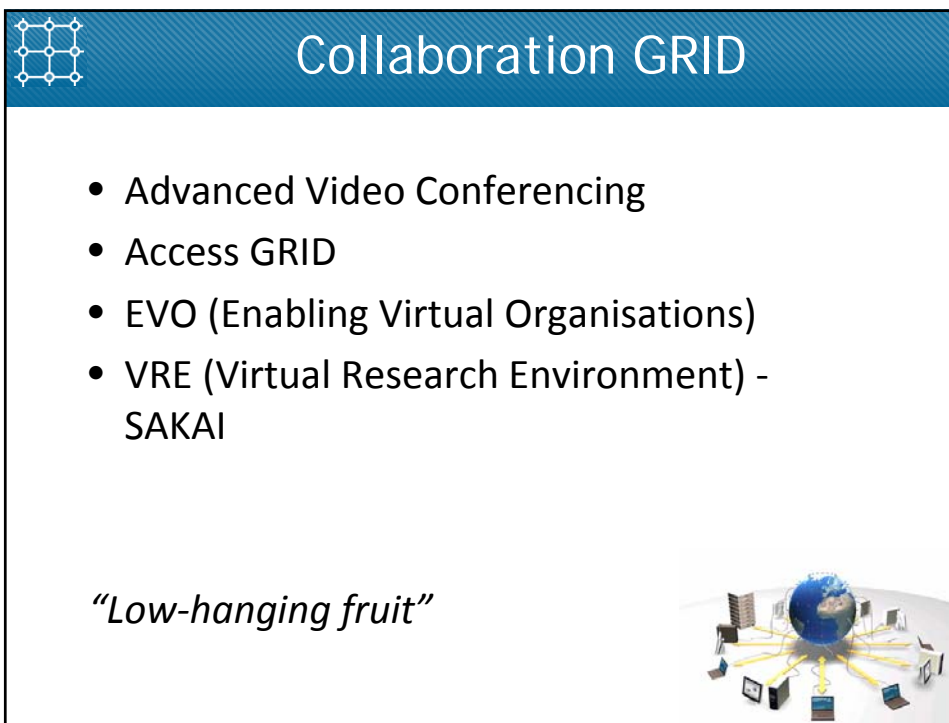
Avoid the “not invented here” syndrome through routine collaboration and consultation with partners:

- GRID Technology aligned with APAC Grid
- VPAC: Victorian Partnership for Advanced Computing
- Further technology sharing links with PRAGMA, James Cook University, Oxford and UC San Diego, Caltech

Three themes

Data GRID, Computation GRID, Collaboration GRID







Computation and Data GRID

Bringing site specific HPC Resources to NZ Researchers

BeSTGRID Goal: to streamline access

Connect the resources and transparently present them to the community

To match users and their jobs to the best computational resources for their needs

“Not-so-low-hanging fruit”



Strategic alignment with APAC GRID

APAC Grid – Australian Partnership for
Advanced Computing GRID

- BeSTGRID will aim to **align technically** with APAC GRID (Identity and Access Management, Grid Operations Centre)
- Will **facilitate interoperability** and possible partnership in future





Federated Identity and Access



australian
access
federation



- **Australian Access Federation** (related to MAMS)
- **Shibboleth** and **OpenIDP**
incorporating MediaWiki, Sakai, GridSphere
- **APAC Certificate Authority**



NZ Bio Portal

blast

Name of sequence file*

Start of required region in query sequence*

End of required region in query sequence*

Blast program*

Protein database*

Report options

No. of short descriptions*

No. of alignments*

Alignment view options (not with blastx/tblastx)*
0: pairwise

Show GI's in defines (NCBI db only)*

SeqAlign file (query define must be believed)*

Believe the query define*

HTML output*

Implementing **exemplar** localised **research portal**





University of Auckland



Integrative Biology - Bioengineering



Earthquake Engineering - Civil Engineering



Bio- and Biomedical Informatics



Synchrotron Analysis

- Materials Chemistry
- Bio and Medical Imaging



Social Sciences Data Archive



Future

BeSTGRID is a Pilot, completing in March 2008

Ongoing, our aims are:

- Knowledge - Transferring to other NZ Universities, CRIs, Industry
- Strategies - Beginnings of a National GRID framework
- Partnerships
 - With APAC
 - with PRAGMA and EGEE
 - Establish industrial links
 - NZSC (cluster)
 - Bio industries (Biomatters, Cartesian GRIDspeed etc)



KAREN and e-Research Capability



- Advanced Network Capability Building Advisory Panel advises REANNZ on capability issues
- Capability Build Fund will allocate NZ\$5M over 2006-2009 to travel, events and projects



- *Advanced Network Capability Building Roadmap 2007-2009*



The KAREN Roadmap



- A national framework for activities needed to foster KAREN uptake and develop NZ eresearch
- Can be adapted by individual organisations for local strategies
- A 'conversation starter' for policy and funding agencies



Due for release July 2007: a 'living document'



Roadmap Overview

Sector

Workforce

Professional development
Postgraduate support
Awards & recognition

eResearch awareness
Funding sources & criteria
Policy agendas

Exemplar projects

Technology

Middleware
Real-time collaboration
Data storage and management
Data collection and analysis

Growing advanced network membership
Governance and support structures



e-Research

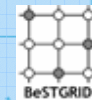
Tools and applications

Collaborative projects & professional development



Middleware

Partnerships & federations



Advanced networks

Peering agreements

