The Kiwi Advanced Research and Education Network: opportunities and challenges

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KAREN – launched late 2006

www.karen.net.nz/topology
KAREN: the vision

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KAREN: the beginning

The KAREN network is only a highway. It is now up to us to put cars on the road. (Paul Bonnington)

Adam Sofen. 2006-04-08 02 Highway 93, Lincoln County. http://www.flickr.com/photos/adamsofen/132668266/
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Capability Building
The Roadmap

- A national framework for activities needed to foster KAREN uptake & NZ e-research
- Adaptable for local strategies
- A ‘conversation starter’ with policy and funding agencies
- Released mid-2007: a ‘living document’

www.karen.net.nz/publications/
Roadmap overview

**People**
- Recruitment and retention
- Professional development
- Postgraduate support
- Awards & recognition

**Sector**
- Advocacy and awareness
- Funding sources & criteria
- Policy agendas

**Technology**
- Identity management
- Real-time collaboration
- Data storage and management
- Data collection and analysis

**Exemplar projects**

**Growing advanced network membership**
- Governance and support structures
Exemplars: KAREN CBF Projects

Trans-Tasman eVBLI
Radio telescopes in NZ and Oz are linked to form a “virtual telescope” thousands of kilometres in diameter.

Pulsenet Aotearoa
NZ microbiologists can access remote experts; interactive video microscopy enables early warnings on disease outbreaks or bioterrorism.

NZ-NEES
NZ earthquake engineers can remotely control simulations on equipment like shake tables and tsunami wave basins.

www.karen.net.nz/case-studies/
Exemplar: BeSTGRID

- Auckland, Canterbury and Massey universities + outreach
- First project in NZ to build shared e-research infrastructure
- Three themes
  - Capture, store & share data
  - Process, analyse & present data
  - Collaborate in real time

www.bestgrid.org
KAREN uptake = high profile exemplars + day-to-day changes in how we work
Videoconferencing & Access Grid

avcc.karen.net.nz
Desktop videoconferencing

avcc.karen.net.nz
Shared workspaces ("VREs")

www.bestgrid.org/index.php/BeSTGRID_Sakai-VRE
A long road ahead...

but we are getting there!
Opportunities and challenges for libraries

• Collaboration and communication
• Content and services
• Data, data, data…
• Roles and relationships
Content and services

- Embedded library resources: Sakaibrary
- Mirroring: BioMirror
- Digital collections: formats and resolutions unlimited by bandwidth: DANA
- Tools and workflows for digital collections: Vannotea
- Consortial licensing (e.g. JISC Collections)

Not all of these require KAREN but they are part of the paradigm shift KAREN enables.
Data, data, data…

- The data deluge has begun
- Policy and funding are dictating sharing
- Researchers need open access to more than publications: datasets, parameters, workflows and provenance
- Sharing data requires metadata standards, e.g. ChemML, BioML
- And of course… copyright, privacy and intellectual property rights are big issues
Roles and relationships

• New roles
  • research repositories
  • data curation
  • others we haven’t even thought of yet!

• New kinds of partnerships
  • scientists and scholars
  • IT specialists
  • other information professionals, e.g. archivists
  • other KAREN members, e.g. CRIs
Challenges

• Now we have KAREN, we need the capability to use it
• Tools are (or will be) available
• But for people to make the most of them, they need
  • Awareness
  • Skills and knowledge
  • Resources