

The Kiwi Advanced Research and Education Network: opportunities and challenges

29th IATUL Conference

Auckland University of Technology, 22 April 2008

Sam Searle

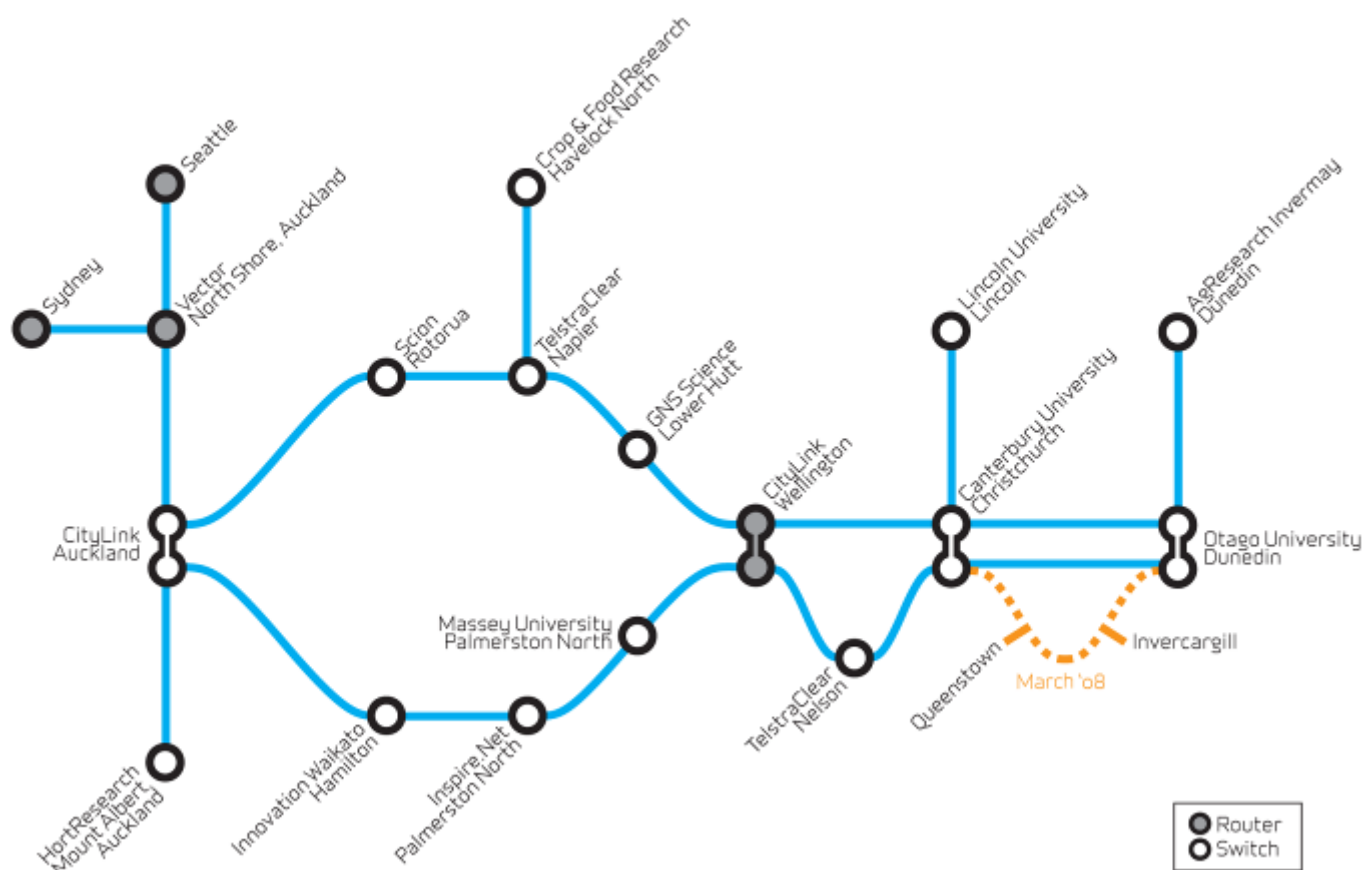
E-Research Development Coordinator,
Victoria University of Wellington

sam.searle@vuw.ac.nz

<http://www.mcs.vuw.ac.nz/Main/E-Research>

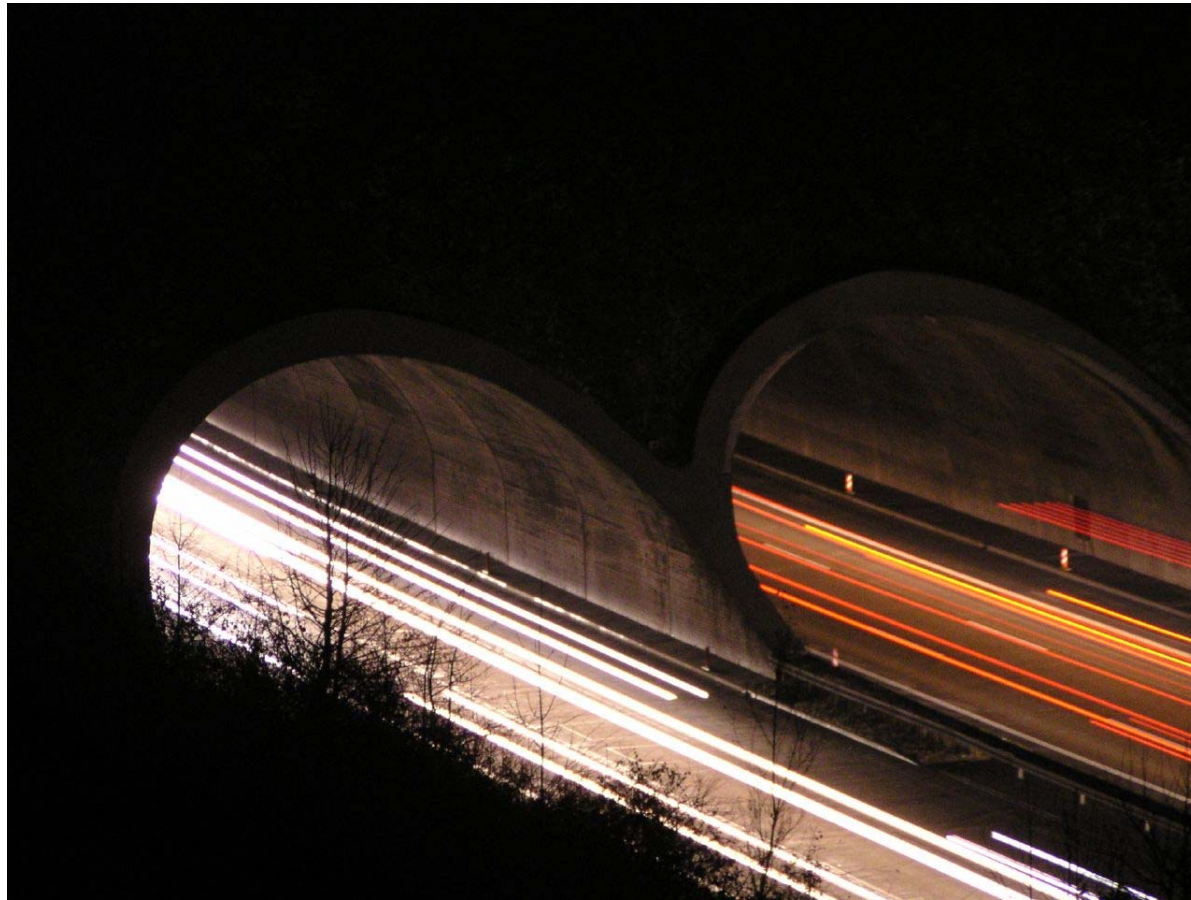


KAREN – launched late 2006



www.karen.net.nz/topology

KAREN: the vision



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/adamsopen/132668266/>

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Capability Building



The Roadmap

- *Advanced Network Capability Building Roadmap 2007-2009*
- 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

Sector

People

Recruitment and retention
Professional development
Postgraduate support
Awards & recognition

Advocacy and awareness
Funding sources & criteria
Policy agendas

Exemplar projects

Growing advanced network membership
Governance and support structures

Technology

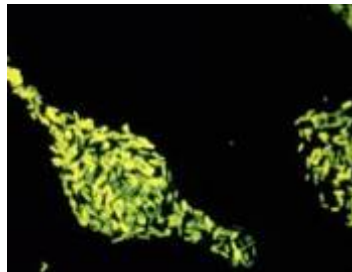
Identity management
Real-time collaboration
Data storage and management
Data collection and analysis

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/



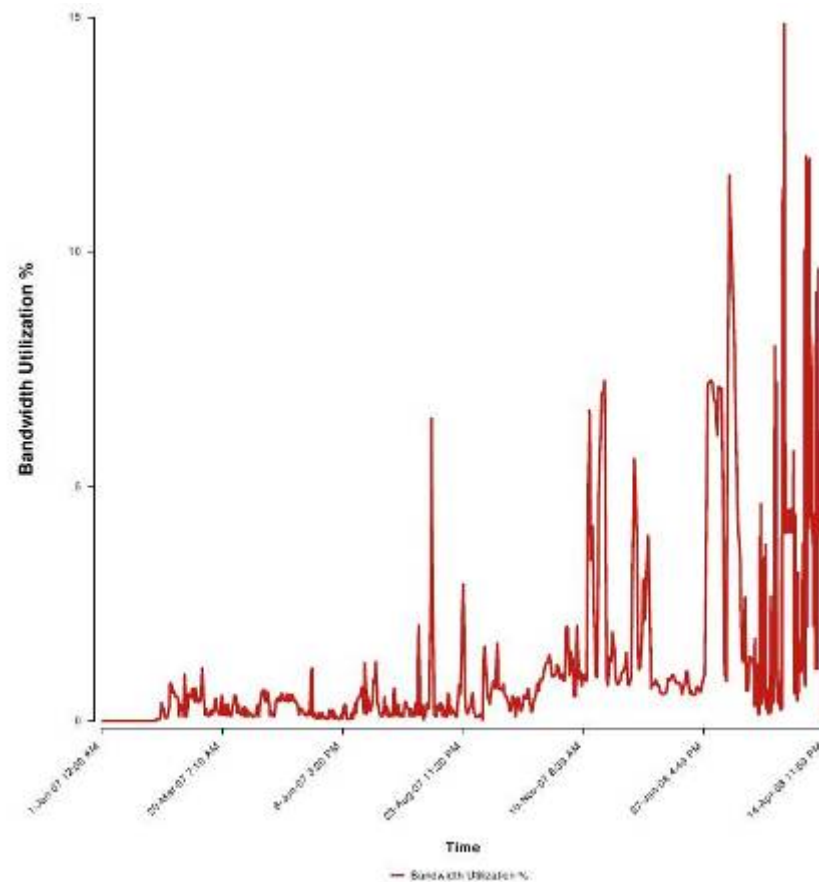
Exemplar: BeSTGRID

- 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

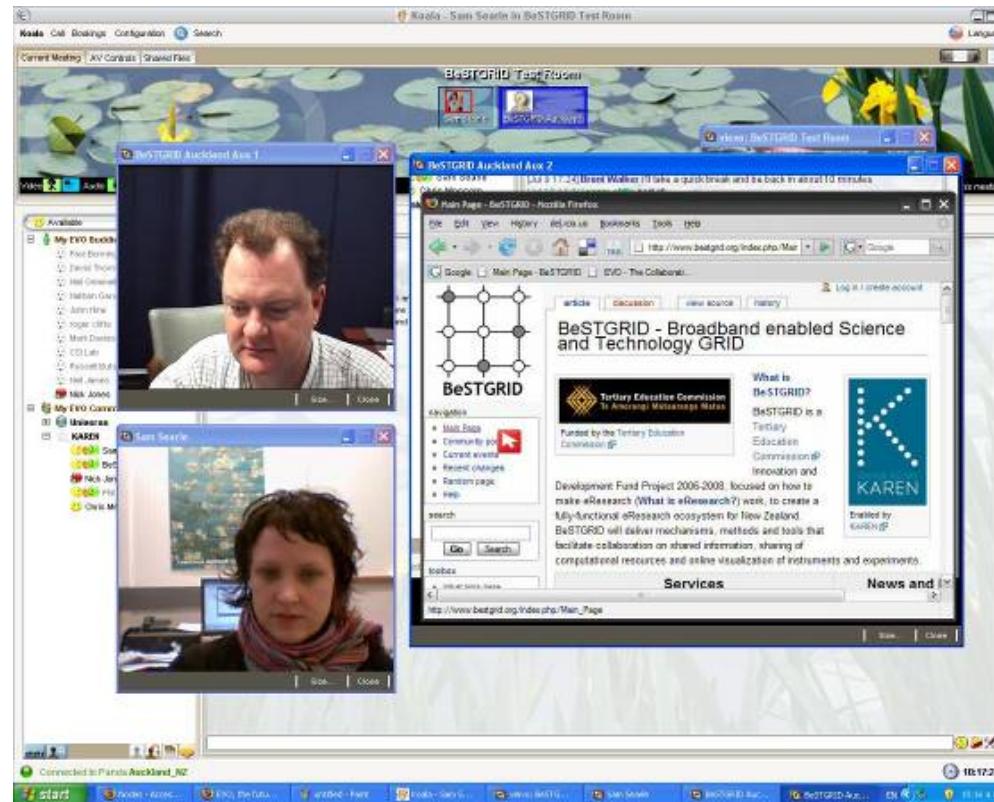


Videoconferencing & Access Grid



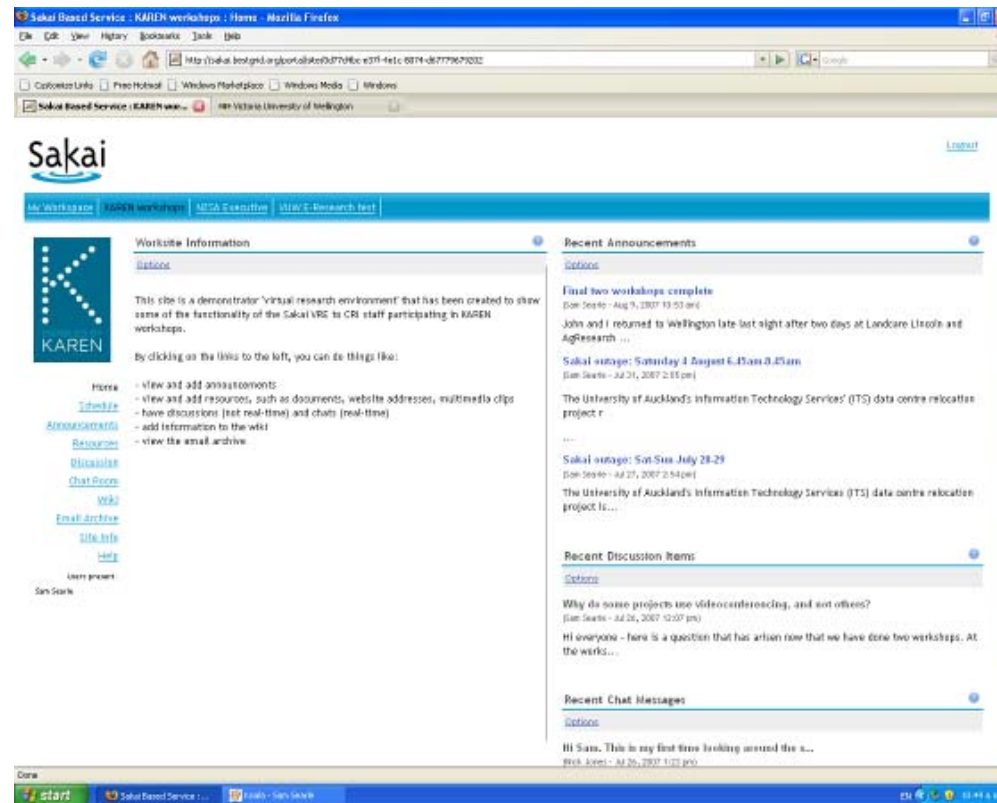
avcc.karen.net.nz

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

