

# What is e-Research?

e-Research is research done faster, to a better quality, or by different methods, using advanced digital tools and services that enable diverse research expertise to be assembled in global teams focused on specific research problems.



# Case Study: Serious Disease Genes Revealed

- Wellcome Trust Case Control Consortium
- 50 research groups
- 200 scientists
- DNA from 17,000 patients
- 15,000 polymorphic markers
- Learned more in 12 months than last 15 years

QuickTime<sup>®</sup> and a  
decompressor  
are needed to see this picture.



# Case Study:

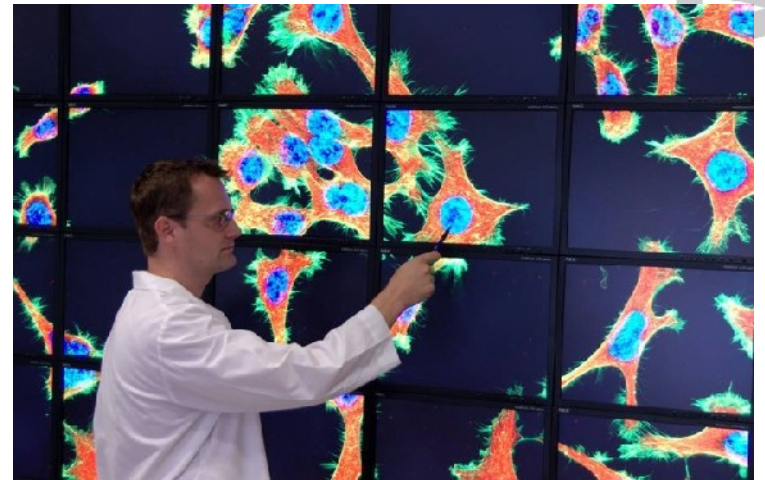
## Functional MRI (fMRI) Data Centre

- Online repository of neuroimaging data
- Typical study comprises:
  - 3 groups
  - 20 subjects/group
  - 5 runs per subject
  - 300 volumes per run
  - 90,000 volumes,  
60GB raw data
  - 1.2 million files processed
- 100s of such studies

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# e-Research @ VUW

- People
  - John Hine
  - Sam Searle
- <http://www.mcs.vuw.ac.nz/eresearch>
- Programming support
- Tools
  - Computational grid
  - Video conferencing
  - Visualisation

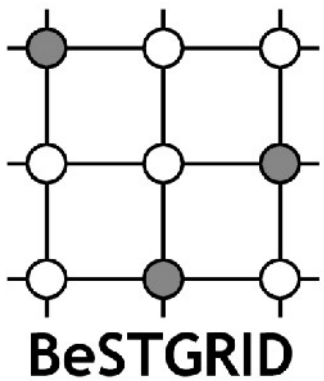




# e-Research in NZ

- KAREN
  - <http://www.karen.net.nz>
  - APAN (<http://www.karen.net.nz/apan26/>)
  - Student award - see web site
- MoRST
  - KAREN Capability Build Fund
  - \$4.3M in next year's budget
  - Research Infrastructure Advisory Group
- High Performance Computing
  - Canterbury BlueFern





# BeSTGRID: Broadband enabled Science and Technology GRID

- [www.bestgrid.org](http://www.bestgrid.org)
- BeSTGRID selected tools
  - EVO, desktop video conferencing
  - Sakai, virtual research environment
  - Data GRID, 100 terabytes of storage
    - Public databases
  - Computational Resources
    - BioPortal
- BeSTGRID - going forward

# e-Research in Australia

- NCRIS
  - National Collaborative Research Infrastructure Strategy
  - \$542 million over 2005-2011
- APAC
  - Australian Partnership for Advanced Computing, 1998-07
  - Now part of Advanced Research Collaboration Service
- eResearch Australasia 2008



# e-Research Travel Awards

- 50% of the cost of attending either
  - APAN
  - UK “All hands” meeting
  - e-Research Australasia
- Balance from CBF travel fund
- Pick up a flyer.

