National Infrastructure Programs Panel

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ABSTRACT

The Australian eResearch Organisations (AeRO) include the state based eResearch providers and a growing list of others including AAF, CAUDIT, and RDSI, helping to identify individual and group eResearch needs, coordinating solutions, disseminating information throughout the community, and contributing to the greater eResearch community through advocacy to government.

The Commonwealth Government, through the Department of Innovation, Industry, Science, Research and Tertiary Education (DIISRTE), has funded a number of programs to provide the eResearch community with advanced infrastructure and related services. The intended outcome is to facilitate research outcomes through greater and simpler collaboration among Australian researchers.

The key programs include the Australian Access Federation (AAF), the Australian National Data Service (ANDS), the National eResearch Collaboration Tools and Resources (NeCTAR), the National Research Network (NRN), and the Research Data Storage Infrastructure (RDSI).

While each program is independently funded and tasked with specific goals and outcomes, the programs have complementary aims to provide researchers with an interoperable national resource set including network capacity, storage, computing capacity, eResearch tools, programs enhancing research data and its access and use, and establishing common authentication mechanisms to simply using the infrastructure and systems.

Each program has individually engaged with researchers throughout Australia, but this session will be the first occasion the collective of programs will be represented together to present their programs, their programs’ relationships and coordination with other programs, and to answer questions on topics that may involve multiple programs. The programs are summarised in the following:

AAF - The AAF provides the means of allowing a participating institution and/or a service provider to trust the information it receives from another participating institution. The AAF processes provide seamless access to resources and secure communication by removing most of the roadblocks to collaboration and sharing at both the institutional and end user levels. AAF allows researchers to use their home institution Login to access a growing number of participating services and resources throughout Australia.

ANDS - ANDS supports the effective collecting, management, and sharing of ever increasing and complex research data. ANDS helps by leading the creation of a cohesive national collection of research resources and a richer data environment that will make better use of Australia’s research outputs, enable Australian researchers to easily publish, discover, access and use data, and enable new and more efficient research.

NeCTAR - NeCTAR will enhance frequently used research tools, develop exemplar digitally enabled laboratories and establish virtual server and cloud infrastructure able to support the next generation of research ‘apps’. Component programs within NeCTAR include Virtual Laboratories, a Research Cloud, new eResearch tools, and a secure and robust hosting service.

NRN - The NRN has component projects addressing specific outcomes that complement the national infrastructure through improvements to backbone capacity including data centre interconnections and accessibility, and addressing improvements to capacity in key areas in each state.

RDSI - RDSI aims to provide reliable storage and consistent interfaces for merit assessed collections of research data such that researchers will be able to use and manipulate significant collections of data which were previously either unavailable or difficult to access. The data will be stored at a small number of scalable data centres across Australia, connected together with a very fast network.
REFERENCES

ABOUT THE PANELISTS
Dr. Glenn Moloney is the Director of the NeCTAR project. Moloney, an Associate Professor at the University of Melbourne, is an experienced researcher with a PhD in Physics from the University of Melbourne, a substantial publication list and ARC grant track record, combined with an established track record in eResearch. He led the establishment of the Australian node of the Worldwide Large Hadron Collider computing grid, as well as leading Australia's participation in the EU funded Enabling grids for e-science program, the world's largest eResearch infrastructure.

Mr. Paul Sherlock has been Director of Information Strategy and Technology Services at the University of South Australia (UniSA) for the past ten years. Prior to joining the University, Paul held senior ICT management roles at the Defence Science &Technology Organisation (Adelaide) and BHP Billiton (Whyalla). Paul is Immediate Past President of CAUDIT and the AAF. Paul has been Director and Chair of SABRENet Ltd since its formation in September 2006. He is a Member of the ANDS Steering Committee, the NeCTAR Project Board and the Australian eResearch Infrastructure Committee (AeRIC). Paul is also the Project Director for the $37M Super Science funded National Research Network Project.

Mr. Philip Tannenbaum is the Centre Manager at the Victorian Partnership for Advanced Computing. He has 37 years experience in supercomputing and related high-end technologies, including senior management and marketing roles with the Australian Bureau of Meteorology, NEC Corp., and Cray Inc. His earlier career included technical positions with Control Data Corporation, NASA contractors, and Texaco Geophysical, all focused on high performance systems.

Dr. Nick Tate is Director of the RDSI project which is based at the University of Queensland (UQ) and President of the Australian Computer Society (ACS). Prior to his role with RDSI, he was Associate Director of the Australian Research Collaboration Service (ARCS) which developed and deployed cloud computing and cloud storage services for researchers across Australia. Nick is a former Chair of the Council of Australian University Directors of IT (CAUDIT) and was previously both IT Director at UQ and the Director of AusCERT, the Australian National Computer Emergency Response Team. He is also a Director of Higher Ed Systems Pty Ltd, Co-Chair of the eResearch Australasia conference and was Chair of the World Computer Congress in 2010. He is currently Chair of the ICT Industry Workgroup representing the ICT industry to the Queensland Government. He has 40 years IT experience with more than 16 years at CIO level.

Mr. David Toll has worked with CSIRO for 9 years where he is Chief Information Officer with responsibility for IT, eResearch and library functions. Previously David held the positions of Chief Financial Officer and General Manager, Finance. David is currently President of the Australian Access Federation, and a member of the VERNET Board, the Australian National Data Service Steering Committee, the National Computational Infrastructure Board, the Pawsey Centre Steering Committee and Australian eResearch Infrastructure Council.

Dr. Ross Wilkinson is the executive director of the Australian National Data Service, dedicated to enabling more researchers re-use data more often. His research career commenced with his Ph. D. in mathematics at Monash University before researching in computer science at La Trobe University, R.M.I.T. and at CSIRO. Some of his areas of research have been document retrieval effectiveness, structured documents retrieval, and most recently on technologies that support people to interact with their information environments. He has published over 90 research papers, has served on many program committees and was a program co-chair for both SIGIR’96 and SIGIR’98. He is now leading the Australian National Data Service creating tools, information, frameworks and the skills to enable Australia’s researchers to more effectively use and re-use research data, wherever it comes from.