

Chair's report – Ron Sandland



Late last year I wrote to the staff of ANDS to thank them for the fantastic job they've done over the past twelve months. In my letter I pointed out some of their achievements from a standing start: key services have been established; the community has been engaged and understands what ANDS' bold ambitions are; not only that, they (almost invariably) like what they see; the paths forward have been charted; the advent of significant new EIF funding for eScience has brought with it the need for significant change. The planned and methodical way the consultation was carried out has helped establish the bedrock on which ANDS can develop.

ANDS is an initiative for the whole of the Australian research community. Some of the ANDS funding will go to establish key infrastructure to facilitate data capture, sharing and re-use for the whole community. But of course a significant part of the funding, as discussed in the consultation process, is being spent in individual institutions in our data capture and seeding the commons programs. The ANDS Steering Committee thought long and hard about how to allocate the available funds and, predictably, not all institutions are equally happy with the algorithm we selected to do this. However,

it was based on the best measures we had available of research quantum. I'd like to pay tribute to the quality of the work carried out by the research institutions in coming up with responses to our letters of offer that were creative and constructive. The timelines we required were (we know) very challenging but the response was really as good as we could possibly have hoped for.

So at the beginning of 2010, ANDS is poised to begin its commitment to deliver across a significantly re-jigged and enhanced work program. There has been a fantastic level of engagement with the research community which has caused a few challenges in managing the initiative – getting staff on board, internal and external communication, for example.

At the Steering Committee we are now working on the challenge that was posed to me at one of the consultation meetings: how can we make ANDS sustainable? In other words, how can we ensure that ANDS delivers something of lasting value that doesn't fizzle out after the current Government funding finishes. We have lots of ideas but no definitive answers yet. However, the responses from institutions and researchers indicate strong demand and interest in effective use and reuse of data at a new scale. This issue will be a permanent item on our agenda throughout 2010. Any thoughts you may have would be very welcome and can be emailed to contact@ands.org.au

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Executive Director's report – Ross Wilkinson

While ANDS continued with its many engagements across the sector, a substantial part of the second half of 2009 was spent on planning and outreach activities to help us make the best use of the new funding announced in the 2009 budget. We started with extensive consultations across the sector about the proposed plans for the Australian Research Data Commons. The consultations were held all over the country, leading to significant support for the plans - particularly the decision to concentrate on developing the necessary infrastructure to significantly improve Australia's ability to capture and manage its research data. We then moved rapidly to seek ideas and expressions of interest from a substantial number of institutions, focussing at this stage on data capture and management at the local level. Given the very tight timelines involved we are grateful that so many organisations have been willing and able to provide such high quality responses.

The ANDS team has done extensive work on how best to support these approaches, while looking for commonalities and efficiencies. I have been excited to see Australia's research organisations look purposefully at the opportunity to enhance their research strategies through improved research data capture. Some organisations clearly see this as a way of furthering their already articulated plans; others see an opportunity to initiate new approaches. Some are looking at ways of positioning their organisation's research data holdings as part of a larger theme, and while we recognise that some feel that they could do much more if the funds were not limited they have still embraced the chance to become involved.

ANDS looks forward to working with many of you on rapidly building a research data commons that is national in scale and international in significance.

ANDS out and about – ANDS engagements



L to R: Margaret Henty (Capabilities Program Manager, ANDS), Dr Ian Barnes (Research Analyst, ANDS), Vicki Picasso (Research Repository Manager, University of Newcastle), Lyn McBriarty (Director, Research Office, University of Newcastle)

Seeding the Commons

The Seeding the Commons team has been closely involved with the ongoing expression of interest process being run by ANDS, particularly in the assessment and review of the proposals. Additionally the team has been working closely with a number of institutions to further develop their data management needs, including Monash, Newcastle, Victoria, CSIRO, ANSTO, TPAC and the South Australian universities. The team continues to grow, with more staff expected to join soon.

Capabilities

The University of Newcastle has been actively developing a program to support eResearch and improve data management and sharing during 2009. As part of this program, Ian Barnes and Margaret Henty facilitated a workshop for staff of the library, research office and IT. This was designed to provide information about eResearch and the role it plays in the current research environment.

Speakers from different parts of the University spoke about their different roles in meeting the requirements of the *Australian Code for the Responsible Conduct of Research*, about activities related to IT provision, data storage and retention and about the proposed role of the library in providing support for data management and description. Ian and Margaret finished the day with case studies demonstrating the kinds of issues which researchers face in conducting research in this changing environment.

National eResearch Architecture Taskforce (NeAT) project update

2009 saw all of the round 1 NeAT projects continue and a number of round 2 projects successfully commence. In addition to the projects identified in the last issue of Share (#2), BioSecurity Collaboration Platform, and the National Criminal Justice Research Data Network have both started up. Two projects are worth highlighting in this issue.

The Spatial Information Services Stack (SISS) project was funded in round 1 to build software that would expose spatial data for harvesting. ANDS is now funding a national deployment of the resulting software across a range of government instrumentalities. This will expose existing spatial data for discovery through the ANDS discovery services and significantly enhance the outputs of the new Public Data program.

The Australian Node of the Human Variome project was officially launched on December 22 2009 (although work was well underway prior to this date). This will bring together data about human genomics (the genetic code for an individual), phenomics (the way this code expresses itself as a human being) and clinical data (the illnesses/diseases for that person). This has the potential to dramatically enhance our understanding of disease processes and the most effective treatments. It also brings with it a fascinating range of ethical and data linking issues.

Conference reports

International conference on Dublin Core and Metadata Applications 12-16 October 2009

In October 2009 Joan Gray attended DC-2009, the ninth International Conference on Dublin Core and Metadata Applications at the National Library of Korea, Seoul, Korea (October 12-16, 2009). The 2009 program of tutorials, keynotes, conference papers, special sessions and community meetings brought together metadata researchers and practitioners from 18 countries and territories across a range of domains to focus on the theme of Semantic Interoperability of Linked Data.

Tim Berners-Lee in his presentation on the next web (Web 3.0) (canned presentation at http://www.ted.com/talks/tim_berniers_lee_on_the_next_web.html) outlined his vision for linked data and the Semantic web. The technical and social challenges presented by this idea of linked data were explored through a number of sessions at the conference. Linked data uses web standards and technologies such as URIs, HTTP and RDF. Researchers can contribute to and benefit from the linked open data cloud by publishing their data online so that data can be exposed, shared, interconnected and re-used. Cross database search tools can query the linked data from different data sources.

Another interesting topic discussed at the conference which is relevant to ANDS future vocabulary service development activity was web enabled vocabularies and the use of web standards such as SKOS (Simple Knowledge Organisation System). There



Max Dekkers gives a presentation at the Dublin Core and Metadata Applications Conference in Seoul

Photo courtesy of DC 2009 (<http://www.facebook.com/group.php?gid=152707484967>)



Joan Gray outside the National Library of Korea

was a paper on modelling classification systems (eg DDC) in SKOS which generated a lot of discussion. Library of Congress Subject Headings (LCSH) has been converted to SKOS and published as linked data <http://id.loc.gov/authorities>. Dryad (http://ils.unc.edu/mrc/dryad_repository/), a digital data repository underlying scientific publications and the related HIVE project (https://www.nescent.org/sites/hive/Main_Page) also encode discipline specific vocabularies in SKOS as part of its automatic metadata creation activities. The SKOS demo and hands on session provided further insight into using SKOS for shared RDF vocabularies.

An important community meeting with international membership and held in conjunction with the conference was the DC Science and Metadata community (SAM) meeting. Brief presentations on various projects were followed by open discussion. More information is available at: <http://dublincore.org/groups/sam/>

The highlight of the conference was Eric Miller's presentation on the future Web 3.0 and Zepheira's open source Recollection Platform. In 2009 the Library of Congress began a pilot project collaborating with Zepheira under the National Digital Information Infrastructure and Preservation Program (NDIIPP) to provide enhanced discoverable access for NDIIPP collections making them easier to find, access, share and integrate with other digital information sources. More information about the program is available at: <http://www.digitalpreservation.gov/index.html> and at <http://zepheira.com/>

The conference programme and papers are available at http://www.dc2009.kr/sub/cfs_uprog_01.php and Joan would be happy to answer questions from interested people at joan.gray@ands.org.au.

eResearch Australasia 9-13 November 2009

ANDS staff were out in force for eResearch Australasia 2009 which was held from 9 - 13 November in Sydney at the beachfront Novotel Manly Pacific (<http://www.eresearch.edu.au/>). Adrian Burton gave a paper called 'Publish My Data: Brought to you by the services of ANDS and ARCS, and the letter D' (<http://ands.org.au/presentations>), while members of the ANDS team



ANDS staff, Dr Xiaobin Shen and Chris Blackall talk to attendees at the ANDS booth

co-convened two workshops at the conference, 'Institutional approaches to data management support: exploring different models' and 'Integrated data services: ARCS & ANDS' (for more detail see pp 7-8). All members of the team took a turn answering questions and meeting new people at the ANDS booth. As well as taking in the many interesting papers, ANDS staff met with a number of current and prospective partners to discuss development work for 2010, and took the opportunity to have an all-ANDS dinner while in Manly.

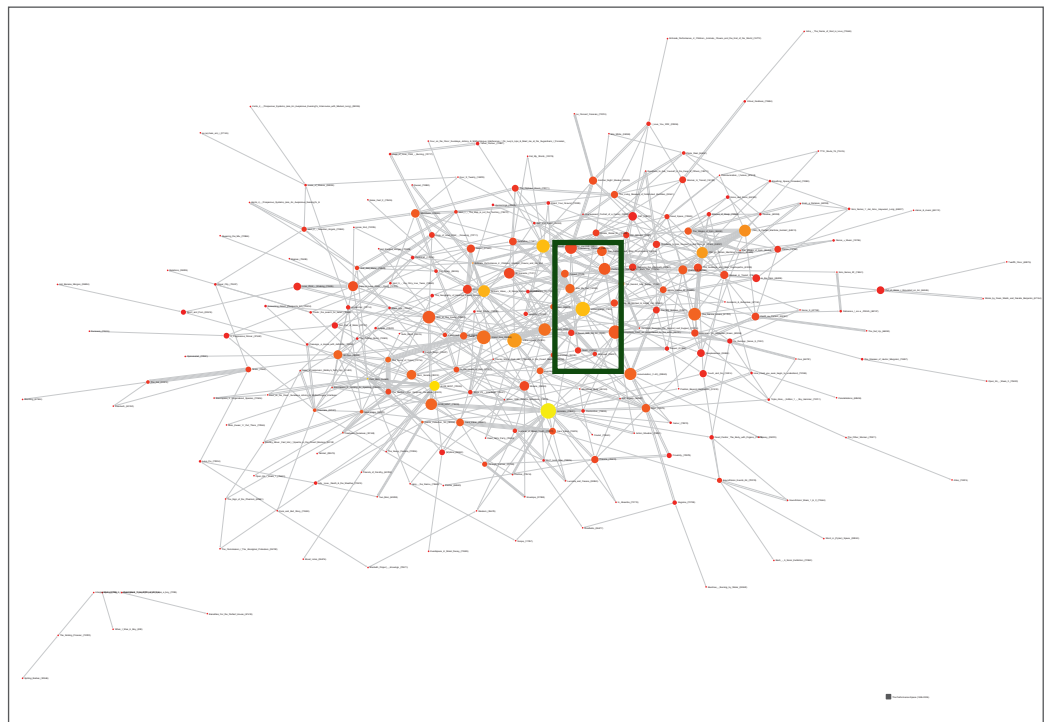
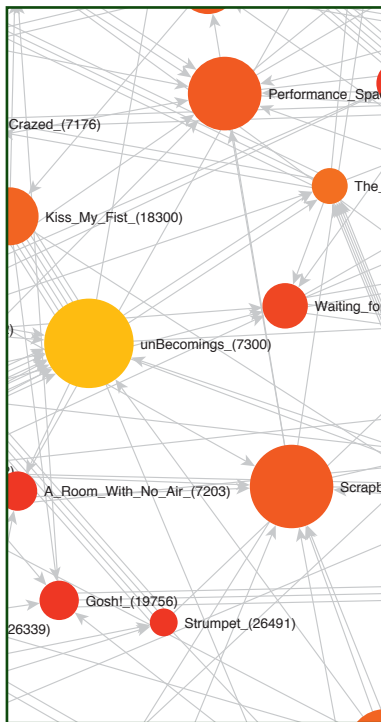
Focus on Research Excellence – Aus-e-Stage: Visualising the Australian performing arts

The Aus-e-Stage project, developed through the National eResearch Taskforce (NeAT) program, builds on the success of the AusStage partnership (<http://www.ausstage.edu.au>) which is now into its second decade. AusStage is a partnership between academic researchers in theatre, drama and performance studies at eighteen universities, and is widely used as a primary research tool by policy-makers, arts administrators, artistic directors, event producers and performing artists and by staff in libraries, museums and archives around the country. Collaborating partners in government and industry include the Australian Council for the Arts, the Performing Arts Special Interest Group of Museum Australia and Windmill Performing Arts. AusStage meets the national need for public access to reliable information on live performance in Australia. Methodological innovations introduced by AusStage are attracting interest from researchers internationally.

The Aus-e-Stage project aims to improve how researchers access Australian performing arts data. These developments are being driven by a demand amongst researchers for new interfaces that

allow more flexible interaction with the dataset and collaboration across sectors of the creative economy. Dr Jonathan Bollen from the Drama Department at Flinders University coordinates research for AusStage. Jonathan says that, "Information technology gives researchers the opportunity to record what they know about the performing arts. Prior to AusStage researchers had to either be physically present to know about an event or to have read a review about it. AusStage allows researchers to collectively share what they know." Work has commenced on the design of three exciting new services that will operate alongside AusStage's current text-based search-and-retrieval service once testing and deployment has taken place.

The Mapping service will provide an interactive, map-based interface with which to search, manage and display AusStage data. Users of the database will be able to display such information as venue addresses and the latitude and longitude coordinates. For example, if a user is interested in Ibsen's *A Doll's House* they will be able to display where this has been performed on a map and



Network of events linked by artists working at the Performance Space in Sydney from 1995-2005. Image courtesy of AusStage

view all the events that are on around that time. It will be possible to zoom in on a particular region on a map. The Aus-e-Stage team is exploring how to display the AusStage data against different types of maps. Maps will show the demographic characteristics of a region. The historical dimension to the mapping of datasets will also be of great use to researchers.

The Network service will provide an interactive interface for navigating and analysing the network of artistic collaborations embedded in the AusStage dataset. This is an important resource for people working in the performing arts. Information about crews, directors and actors can be used to reveal patterns of creative activity and lines of artistic influence. Jonathan says that, "The intention is to provide users with an exploratory browsing experience by using visual representation of networks to show how artists collaborate. The design will go through several iterations and will be tested on users."

The third service is to provide a new mobile interface that will allow AusStage to solicit live, location-based input from spectators. This project will create a remote-access feedback facility for spectators to respond to productions by recording short SMS-style comments for other users to read and comment upon. Until now it has been difficult and expensive to obtain data on audience responses. Researchers and industry are interested in finding out what the audience thinks immediately after they see an event or even at regular intervals during an event. Emoticons and cloud tags may be used as a means of identifying the emotional content of responses. Jonathan says that, "The issue of how the audience response data is to be moderated is complex and will need to be thought through carefully. Our initial plan is to display visual aggregations of audience response data, rather than individual responses."

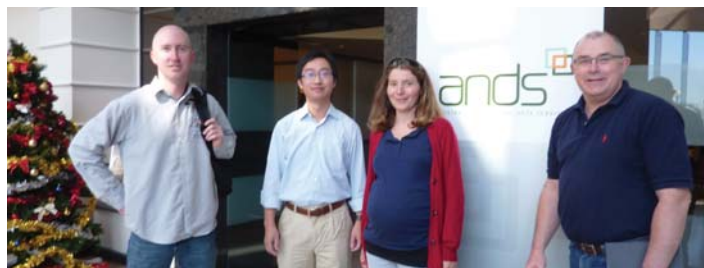
The audience response data will be made available through the AusStage website. Jonathan says that, "There are some complexities to consider such as how the information is to be stored and what kind of access and reuse provisions will come into play, but AusStage is committed to holding the data in perpetuity. The data will be of national significance so it is important that all sustainability issues are addressed." The entire AusStage dataset will be discoverable through ANDS Research Data Australia. It is yet to be determined what metadata will be recorded with each piece of audience response. The intention is to keep the process as simple as possible for users. Responses will be linked to event records in the AusStage database; it is likely that time and place metadata will also be recorded. There is growing interest from researchers and industry for production specific information and it could also be useful to collect metadata about the contributors. The service will start with three pilot projects focused on particular productions. The intention is to grow the service in collaboration with festivals and touring companies.

The mapping, network and audience response tools that Aus-e-Stage is developing will have exciting applications for other discipline areas. Many researchers want to map their data using applications such as Google Earth. The software will be produced in modules and the code will be made available for re-use by other researchers. The key challenge for Aus-e-Stage is to develop services that researchers will enjoy using and find productive to use.

ANDS Roadshows

There has been continued interest in ANDS Roadshows, which have now been held in Adelaide, Newcastle and Hobart. There has been a consistently high level of interest in the *Australian Code for the Responsible Conduct of Research*, in techniques around data management planning and in the developing range of ANDS services.

Invited speakers from local institutions have proved a big hit in providing a hands-on perspective on the responsibilities of institutions relating to the *Code*, and ANDS is grateful for their participation. In Adelaide, our guest speaker was Dr Mark Hochman who is Director of Research & Innovation Services at the University of South Australia. In Newcastle, it was Lyn McBriarty from Research Services at the University of Newcastle and in Hobart, Brigid Freeman from the Governance and Legal Office of the University of Tasmania.



L to R: Dr Peter Blain (Tasmanian Partnership for Advanced Computing), Dr Xiaobin Shen (ANDS), Dr Paola Petrelli (Tasmanian Partnership for Advanced Computing), Neil Dickson (ANDS) at the Hobart Roadshow

Most of those attending the workshops have been staff of libraries, IT departments and research offices, with a sprinkling of researchers, including some post-graduate students. As well as learning more about the *Code* and about ANDS, the participants have appreciated the opportunity to meet with staff of other institutions that are facing the same issues in conducting research.

The Roadshow program will continue in 2010 with visits to Sydney, Melbourne, Canberra, Townsville and Darwin.

DataCite: A new era for research data citation



On December 1, 2009 in London, a group of leading research libraries and research data management organizations founded the international initiative, DataCite (<http://www.datacite.org/>) to bring research data under a common framework for identification and citation. ANDS will be joining DataCite in early 2010.

The stated objectives of DataCite are to "establish easier access to research data on the Internet, to increase acceptance of research data as legitimately citable contributions to the scientific record, and to support data archiving that will permit results to be verified and re-purposed for future study."

DataCite will provide a mechanism to register datasets and issue unique digital object identifiers (DOI names) to them. DOI names are widely used in scholarly publications as a means to link to and cite published research and are familiar to most researchers.

Adam Farquahr, Head of Digital Library Technology, British Library and new-elected president of DataCite's executive board explained: "DataCite will have a significant impact in the way datasets are recognized and persist in scholarly communication and will serve to rejoin the widening gap between the published record and the data that underlie it."

ANDS will use its membership in DataCite to offer DOIs for data in the Australian Research Data Commons through the Identify My Data service (www.ands.org.au/services/identify-my-data.html).

Forthcoming events

Gumboots for the Data Deluge: defining and describing collections for the Australian Research Data Commons - Melbourne

To be held in association with VALA2010.
Friday, 12th February, 2010. From 9:30am - 1pm.
Monash Conference Centre, Collins Street, Melbourne

Registration details at <https://apollo.anu.edu.au/apollo/default.asp?pid=4352&script=true>

ANDS Roadshows

Canberra – 30-31 March, 2010
Sydney – 19-20 April, 2010
Melbourne – May, 2010
Townsville – June, 2010
Darwin – June 2010

Dates and registration details forthcoming at <http://ands.org.au/events/roadshows.html>

Meet the ANDS Staff – Claire Hollingsworth

Claire Hollingsworth is the Director, Public Data for ANDS. She joined ANDS in October 2009 and works from the Canberra Office. Claire is responsible for liaison with a range of government sector agencies and will facilitate programs of work that will make available existing data collection descriptions of public sector information and thus make those public sector data resources more discoverable by research communities.

Claire comes to ANDS from CSIRO, one of the key partners in the ANDS collaboration. She has worked for many years in the Information and Technology environment and has spent the last ten years working in the project management and management arenas.

She is looking forward to the coming New Year as "... it will be one of challenges and excitement. Many of the proposed engagements with educational institutions are now taking off, and we are ready to start the public sector data engagements in earnest."

Claire has been known to spend many hours stitching patchwork quilts and sees the ANDS data enablement program as an extension of this love. So many beautiful pieces of information just waiting to be sliced, positioned and restitched to form a new masterpiece of such immense value and beauty to our communities.

"There is so much good information out there that can benefit not only academic researchers, but also other government agencies and community groups. The more credible the information that can be accessed or leveraged to assist in our government policy decision making processes the better. Often we are constrained by information that comes from only our known sources. I see ANDS as a facilitator and an effective enabler to ensuring that data from reputable sources can be make known and thus become more readily available to our future key decision makers."



"...we are ready to start the public sector data engagements in earnest"

Institutional approaches to data management support workshop 9 November 2009

eResearch Australasia provided a good opportunity to bring people together to discuss the issue of how research institutions are organising themselves to improve data management. A workshop, held on the day prior to the conference proper, was organised by ANDS, Monash Library, CSIRO and QUT Library. The workshop focused on developments at Monash University, CSIRO, QUT, Griffith University and the University of Newcastle but was designed to provide plenty of time for discussion and input from other institutions.

Presenters spoke about how they are meeting the data management challenges arising from the *Australian Code for the Responsible Conduct of Research*, and the audience contributed their experiences in a lively

discussion. Initiatives underway include eResearch support and training, policy and planning, developments in repository capacity and services, and engagement with ANDS to publish data through the Research Data Australia portal.

The workshop showed that an effective common change strategy, of building on existing strengths and introducing change incrementally, has evolved and is improving research data management capabilities in Australia's diverse research institutions.

Over 60 people attended the workshop, with participants from as far afield as Germany, Zambia and New Zealand.

Integrated data services: ANDS and ARCS workshop 13 November 2009

ANDS and ARCS ran a full-day workshop on Friday 13th November as part of the eResearch Australasia 2009 conference. This workshop was well attended, with around 80 participants.

In the morning session, Florian Goessmann from ARCS gave an overview of the tools and services offered by ARCS Data Services. This presentation covered the ARCS Data Fabric, the ARCS Database Service and the ARCS Data Transfer Service. After morning tea, participants who had brought laptops were able to try these services.

After lunch, Ross Wilkinson gave a general introduction to ANDS and Adrian Burton introduced the ANDS Products. Ian Barnes gave a live demonstration of Register My Data and Identify My Data, including authentication using the Australian Access Federation and the ARCS Identity Provider. Finally Heather Grant ran a hands-on session in which participants were able to try out Publish My Data for themselves.

This workshop was well received, with positive feedback from participants and an atmosphere of interest and enthusiasm.

CAIRSS Community Day 1 December 2009



Professor Greg Hill, Deputy Vice-Chancellor, University of the Sunshine Coast gives the welcome address at the CAIRSS Community Day



L to R: Kate Watson (CAIRSS Project Manager and Repository Specialist), Dr Ross Wilkinson (ANDS) and Helen Livingston (University Librarian, University of South Australia) at the CAIRSS Community Day

The CAIRSS Community Day was held at the Innovation Centre at the University of the Sunshine Coast on Tuesday 1st December, 2009. Ross Wilkinson was invited to give a general introduction to the Australian National Data Service as part of a busy and interesting program of speakers. CAIRSS and ANDS both care about outputs of research and the inputs to research, and ANDS will be

CAIRSS is the CAUL Australian Institutional Repository Support Service (<http://cairss.caul.edu.au/www/index.htm>). The primary function of CAIRSS is to offer support for Repository Managers in the higher education sector in Australia. It also provides a forum to represent the collective interests of repository managers by hosting topic teleconferences and other events. Advice is available about areas such as data migration, metadata, standards compliance, import and export, harvesting and ingest of new forms of digital material.

funding a staff member at CAIRSS to help strengthen this relationship. Research papers and research data are both outputs and inputs into research. Ross asked the audience to consider what the key role of the institutional repository will be to support research data. An interesting discussion ensued.

The CAIRSS Community Day papers are available at: http://cairss.caul.edu.au/www/events/cairss_community_day_program.htm

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