Epic Fails in eResearch - Mark II

Joe Thurbon¹, Anne Cregan¹, Ian Gibson¹, Rob Cook², Ann Borda³, Bill Appelbe⁴, Mary Hobson⁵, Nathan Bindoff, Jenni Harrison⁷

¹Intersect Australia, Sydney, NSW, Australia, {anne, joe, ian}@intersect.org.au
²QCIF, Brisbane, QLD, Australia, rob.cook@qcif.edu.au
³VerSI, Melbourne, VIC, Australia, Ann.Borda@versi.edu.au
⁴VPAC, Melbourne, VIC, Australia, bill@vpac.org
⁵eRSA, Adelaide, SA, Australia, mary.hobson@ersa.edu.au
⁶TPAC, Hobart, TAS, Australia, N.Bindoff@utas.edu.au
⁷iVEC, Perth, WA, Australia, jenni@ivec.org

BACKGROUND
This BoF was first run at eResearch Australasia 2011. It was very well attended and generated a great deal of interest and conversation, resulting in a number of requests for it to be run again. This year it is being formally supported by AeRO, the Australian eResearch Organisation, a consortium of all the Australian state eResearch agencies. with the intention of exploring failures in eResearch further and building the discussion and learnings. We feel that last year’s BoF only touched the tip of the iceberg, and there is a great deal of potential to share more experiences and insights.

DESCRIPTION
“There are no secrets to success. It is the result of preparation, hard work, and learning from failure.”

Colin Powell

Those involved in research understand that failure is par for the course. Indeed, those from the Popper school of scientific theorising hold that the possibility of failure is a necessary condition for science[1]. Software engineering is a profession whose history is littered with the carcasses of failures on the grandest (and sometimes spectacular) scale [2]. Estimates of software failure rates range from 60% to 90% [everyone has their own pet theory, and no-one agrees on the number, everyone just agrees that it is high]. eResearch brings together research and software, applying technology to a rapidly changing constantly evolving landscape. While it is unlikely that we will have failures that match the pyrotechnics of Ariane 5, we as eResearchers have the capacity for many and varied epic fails[3]. eResearch encompasses more than software delivery – and examples of failed services and infrastructure also abound.

The purpose of this BoF is to provide a forum for a free and frank discussion of our, as eResearch organisations, most epic of failures. We will laugh, cry, and most importantly learn from our mistakes. Attendees should bring:

• a description of a project, service or process that has flat out not worked;
• the lessons they have learned from their failure;
• a sense of self-deprecating humour.

The goal of the BoF is that:

• we have the chance to learn from one another’s mistakes; and
• we have a chance to learn from the insights of others regarding our mistakes;

WHO SHOULD ATTEND, AND WHY
This BoF is open to any and all people working for eResearch service organisations. Attendees should attend because it is quicker than having to live everyone else’s mistakes for yourself.
In all seriousness: to establish a culture of excellence within eResearch (or anywhere) it is vital that the community performs ongoing, frank, self-assessment. This is incredibly difficult and sometimes painful to achieve. A supportive group with shared experiences has been shown to be effective in allowing these types of self-analyses to be executed.

**Outline**

We will begin with the traditional approach to BoFs, namely three speakers who are willing to air their dirty laundry. Each will have 10 minutes, including questions.

1. **Epic failure in software development.** 10 minutes
2. **Epic failure in service delivery.** 10 minutes
3. **Epic failure in infrastructure delivery.** 10 minutes

The second half-hour will be a Donohue-style guided discussion, where audience members are encouraged to comment, vent, or confess to their own failures.

**References**


**About the Speakers**

**Dr Joe Thurbon (Convenor)**

Joe Thurbon is the Member Services Manager at Intersect, as well as the eResearch Analyst at Southern Cross University. He has a research background in logic and diagrammatic reasoning, and has practiced software engineering for almost 20 years. For the eight years prior to joining Intersect, Joe worked at CISRA, Canon's Australian R&D company, researching and developing machine learning approaches to image processing problems. Joe has a BSc (Hons) from the University of Sydney in Computer Science and Psychology, and a PhD in Computer Science from the University of New South Wales.

**Dr Anne Cregan (Convenor)**

Dr Anne Cregan has been an eResearch Analyst at Intersect for 4 years and has worked on a broad spectrum of eResearch projects from inception through to deployment. Prior to working at Intersect, she did a PhD in Semantic Web technologies at the University of UNSW, focusing on ontologies, conceptual modelling and knowledge representation. Her PhD was sponsored by NICTA, and involved working in W3C and ISO knowledge modelling and extraction standards committees. She also has a wide range of IT, Analyst and Management experience from the corporate world, and a Bachelor of Science from the University of Sydney with honours in Psychology.

**Dr Bill Appelbe**

Bill Appelbe is the founding CEO and Chief Scientist of Victorian Partnership For Advanced Computing (VPAC) since 2000. Bill completed an undergraduate honours science degree at Monash University in 1974 then completed a Masters then Doctorate in Computer Science and Electrical Engineering in 1978 at the University of British Columbia. Subsequently, he was employed as an
Assistant Professor at the University of California, San Diego (1979-1986), then as an Associate Professor at Georgia Tech (1987-1998). Bill's research interests are in parallel programming tools, software engineering and software frameworks. Bill's research in parallel programming dates back to the early 1980's with the development of a unique parallel programming static debugging tool, followed by ongoing development of interactive parallelization toolkits and animation tools for parallel programming (funded by the NSF, IBM, and LANL). Bill is an honorary faculty member of Monash University and RMIT.

Prof Nathan Bindoff

Prof Nathan Bindoff is the Director for the Tasmanian Partnership for Advanced Computing (TPAC), in Hobart, Tasmania. He is also Professor of Physical Oceanography at the University of Tasmania and CSIRO Marine Research Laboratories, and Project Leader of the Antarctic Climate and Ecosystems Cooperative Research Centre's Modelling Program. He specialises in ocean climate and the earth's climate system. He was a Coordinating Lead Author for the IPCC Fourth Assessment Report, and chair of the Data Products Committee for the World Ocean Circulation Experiment and the International Polar Year.

Dr Ann Borda

Ann Borda is the Executive Director of Victorian E-Research Strategic Initiative (VeRSI). Ann has held senior operational and management roles within academic, research and public sector organisations in the UK and Canada, with substantial experience in overseeing and delivering large-scale initiatives to further education and research. Ann has formerly been responsible for engaging with eResearch communities across the UK in order to facilitate broader and more effective use of national eInfrastructures such as Grid services and data facilities, as well as support for new capabilities and research practices to enable leading edge research. This involved working closely with key stakeholders across the UK Research Councils, government, eScience Centres, and the JISC Committee for the Support of Research, among others, to identify national requirements. Priority areas consisted of the impact on institutions, Research Councils and communities of new technologies, relationships to industry, and the support infrastructures needed for researchers. Among other roles, Ann has overseen the UK Open Source Software Advisory Service and sat on the Advisory Board to participate on discussions about national dissemination efforts, sustainability and licensing. Additionally, Ann has pursued academic research on informatics, human-computer interaction and collaborative technologies, and has undertaken consultative projects on soft system design, data modeling and information systems development.

Dr Rob Cook

Rob Cook is the CEO of QCIF (the Queensland Cyber Infrastructure Foundation), a not-for-profit company established by the Queensland universities to provide high performance infrastructure and services. His consulting company, Pangalax, has been active in the research sector helping with the establishment and development of major research and research infrastructure facilities including several Cooperative Research Centres. Prior to Pangalax, Rob spent several years in North America leading Astracon, a start-up company providing broadband network provisioning software to the telecommunications industry and before that CiTR – a telecoms software company in Brisbane.

Dr Ian Gibson

Dr Ian Gibson has extensive experience at executive level R&D management. He has a strong track record in the research, development and commercialisation of new technology across a broad range of electrical engineering, computer science and digital imaging.
Previously Ian was a Division General Manager at CiSRA, the Australian R&D lab for Canon. There he built research capability over several years to deliver original, world leading technology into a wide range of Canon's major product groups.

Ian has a PhD from the University of New South Wales in Computer Science, a BE in Electrical Engineering (Hons) and a BSc, is on several industry advisory boards and is an Adjunct Professor at the University of Queensland.

**Ms Jenni Harrison**

Jenni Harrison is the eResearch Programme Leader at iVEC. Before taking up her post at iVEC, Jenni was the Digital Education Project Manager at NHS Education for Scotland (NES) for over three years. At NES, Jenni developed and implemented technology such as the Virtual Patient project to support the delivery of healthcare training initiatives throughout Scotland.

**Ms Mary Hobson**

Mary Hobson is the Director of eResearch SA, a joint venture between the University of Adelaide, Flinders University and UniSA. Mary started her technology career in 1975 programming for the Ministry of Defence in the UK. She went on to own a software house and then lectured in systems analysis and management information systems for 10 years. In the early 1990s she went to work in Russia with the Moscow University of Microelectronic Technology, setting up an innovation park. She worked with Russian engineers starting an independent integrated circuit design house, with clients including GEC Plessey Semiconductors, Intel and Alcatel. She also set up a technology transfer consultancy, introducing western companies to technologies developed in the research institutes in the former USSR. In 2005 she moved to the Polytechnic sector in New Zealand, working as a Head of School and later a member of senior management. She became Director of eResearch SA in August 2010.