Practical experiences with Research Quality Exercises
DAG ITWG - August 18, 2006

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ARROW Project Manager

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australian research
repositories online
to the world

MONASH University

NATIONAL LIBRARY OF AUSTRALIA

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SWINBURNE UNIVERSITY OF TECHNOLOGY

Outline…

1. Monash Mock RQF (2006)
   - Process and workflow
   - "TARDIS" pulling it all together
   - Challenges with sourcing outputs
   - Resourcing
2. NZ — Performance-Based Research Fund (PBRF 2006)
3. UK — Research Assessment Exercise (RAE 2008)

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Monash Mock RQF: Process and workflow

- Monash needed to:
  - Identify the University's research
  - Identify the University's researchers
  - Identify the "best" of this research
  - Source electronic copies
  - Store these in the repository
  - Export the link to the material in the repository
  - Collate into groupings, with introductory and contextual comments
  - Present this to assessors, and collect their comments and assessment

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Monash Mock RQF (2006)

Monash needed a way of pulling data together for Evidence Portfolio creation:

- "TARDIS" assembles:
    - Research management system records (RM4)
        - Selection processes
            - What is the "best"?
            - What is the "best" research grouping?
    - Research outputs (ARROW)
    - Staff and Student information (Callista)
    - Grants and funding information (SAP)
    - Annotation and assessment reporting
- Tardis <demo>

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TARDIS Screenshots
Welcome page, after Login

MONASH University

Monash home | About Monash | Faculties | Campuses | Contact Monash

Staff directory | A-Z index | Site map   SEARCH [   ] Go

EXT-RQFBB

RQF Information System
- Home
- Logout

Please note that this system is unavailable due to weekly maintenance between 4am and 5am Sunday mornings Australian EST. Current Melbourne day and time is: Tuesday , 04:31 PM

Welcome to the RQF Information System

Assessor: ▮▮▮▮▮▮▮▮▮▮▮

Thank you for agreeing to be an assessor for Monash University's Mock Research Quality Framework exercise.
Please select the Research Group to assess by clicking on its name in the table below:

Name of Research Group	Group Faculty	Group Department	Research Contact 1	Admin Contact 1	No of Members
Optical Physics	Faculty of Science	Sch of Physics	▮▮▮▮▮▮▮	▮▮▮▮▮▮▮	10

TARDIS Screenshots
Assessment instructions

EXT-RQFBB

RQF Information System
- Home
- Logout

[Assessment Review]

Assessment

Assessor:	~~████████████████~~
Res. Group:	Optical Physics

▶ **Click on the '+' button on the left to see a list of all members of the group**

Please select the assessment tasks below by clicking on tasks 1 through 5 in turn. After each task is complete you will be able to click on the next one. You are always able to logout and come back later to continue with the assessment, so there is no necessity to try and complete it all in one go.

If you would like to review the whole assessment task at any time, click on the button labelled 'Assessment Review'. This produces a printable view of the whole assessment in a new window. Right click the mouse to select option for printing if required.

1. Read Context Statement | Click here to confirm that statement has been read

2. Assess Research Outputs for Quality

3. Assess Impact Statements

4. Questionnaire

5. Sign-off

Summary of your Quality ratings:

Score	No of Research Outputs
5 (Top 10%)	0 (0%)
4 (Top 25%)	0 (0%)
3 (Top 40%)	0 (0%)
2 (Top 60%)	0 (0%)
1 (Bottom 40%)	0 (0%)
Not yet assessed	19 (100%)

[Home]   [Assessment Review]

TARDIS Screenshots
Assessment Review (top of page)

Assessment Review

Assessor:	~~[redacted]~~
Res. Group:	Optical Physics

All Members of the Group:

Name	Group Role	Leader	No of Available Research Outputs	No of Nominated Research Outputs
~~[redacted]~~	Member	No	15	6
~~[redacted]~~	Associate	No	9	-
~~[redacted]~~	Member	No	6	5
~~[redacted]~~	Member	No	25	6
~~[redacted]~~	Associate	No	3	-
~~[redacted]~~	Member	No	24	6
~~[redacted]~~	Member	No	28	6
~~[redacted]~~	Member	No	22	6
~~[redacted]~~	Member	No	5	5
~~[redacted]~~	Associate	No	11	-

A. Research Outputs assessed for Quality:

Please rate each of the Research Outputs listed below for Quality:

Description of Research Output	Quality Score
Allman, B. E., McMahon, P. J., Nugent, K. A., Paganin, D. M., Jacobson, D. L., Arif, M., Werner, S. A., 2000, Phase Radiography with Neutrons, *Nature*, vol 408, Macmillan Publishing, UK, pp. 158-159. **Rationale:** This is one of the earliest papers on the use of neutrons for propagation-based phase contrast imaging. The technique has subsequently been employed in a variety of scenarios for non-destructive testing, including imaging of plasma fusion pellets and early crack detection in aeroplane wings. Citations: 39 (ISI Web of Knowledge). Electronic copy [0.35 meg]	
Bajt, S., Barty, A., Nugent, K. A., McCartney, M., Wall, M., Paganin, D. M., 2000, Quantitative Phase-sensitive Imaging in a Transmission Electron Microscope, *Ultramicroscopy*, vol 83, Elsevier Science, The Netherlands, pp. 67-73. **Rationale:** This paper contains an implementation of the Paganin–Nugent algorithm [Paganin and Nugent, Phys. Rev. Lett. 80 2586 (1998)] for deterministic phase retrieval using three defocused two-dimensional images, for the case of low-resolution electron microscopy of magnetic materials. The method is shown to give quantitative results of in-plane magnetisation distributions that are consistent with those obtained using the technique of off-axis electron holography. The principal advantage of our method is its large field of view, and experimental simplicity. It has since attracted a good deal of research interest from the electron-optics community, with several groups worldwide actively working on extensions and applications of the technique. Citations: 42 (ISI Web of Knowledge). Electronic copy [0.38 meg]	
Gureyev, T. E., Mayo, S. C., Wilkins, S. W., Paganin, D. M., Stevenson, A. W., 2001, Quantitative In-Line Phase-Contrast Imaging with Multienergy X-Rays, *Physial Review Letters*, vol 86, ed 25, The American Physical Society, USA, pp. 5827-5830.	

Monash Mock RQF: Challenges with sourcing outputs

Data

- Variety of sources:
    - HERDC records, Research Management Systems data, ...
    - Lack of synchronisation between them
- Unforeseen inaccuracies with reused data
    - Missing research publication records
        - Finding and resolving ─ used external database mining
    - Dirty data
        - Finding and correcting ─ required matching and data validation techniques

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Monash Mock RQF: Challenges with sourcing outputs

- Poor standard of existing print copies ─ needed to digitise
- Not all available electronically ─ needed to digitise
- Copyright of published versions
- Lack of available data in some areas of Arts and Humanities, especially as research objects and outputs
- Art & Design or Music and Performing Arts
  - Presenting the "story" needs more than words Capturing the exhibition, performance, recital
    - This was not always done or considered in the past ─ requires education and mind shift
- Solivoid <demo>

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Solivoid

This is a possible research output from Monash Faculty of Art & Design

- Solivoid is furniture as art, as an experience for use at exhibitions

- It is complex to describe and understand without seeing it

- One way could be to collect project documents and combine them into a single PDF

- Another way could be to present the documents and images individually in a way that allows an assessor to explore these in a less lineal way…

- <demo>

Solivoid Screenshots
Collection of 23 documents and images

Showing 1 through 10 of 23 entries.
First « Previous | 1 2 3 | Next » Last

Title	Author/Creator	Date	Type
Solivoid: Award - designEX 2005 - Australia - finalists and winners announcement	Design Institute of Australia	2005	article
Solivoid: Award - designEX 2005 - Australia - shortlist announcement	Design Institute of Australia	2005	article
Solivoid: Award - designEX 2005 - Australia - web site - home page	Design Institute of Australia	2005	article
Solivoid: Document - magazine article - Art&Design Magazine	Faculty of Art&Design, Monash University	2005	magazine article
Solivoid: Document - process and meaning	Faculty of Art&Design, Monash University	2005	document
Solivoid: Document - spatial research group - core members	Faculty of Art&Design, Monash University	2005	document
Solivoid: Document - supporting information	Faculty of Art&Design, Monash University	2005	document
Solivoid: Exterior - image - hi resolution	Faculty of Art&Design, Monash University	2005	image
Solivoid: Personnel - research project leader	Faculty of Art&Design, Monash University	2005	article
Solivoid: Process - drawing - hi resolution	Faculty of Art&Design, Monash University	2005	image

AUTHOR/CREATOR
Faculty Of Art&Design, Monash University (19)
Design Institute Of Australia (3)
Faculty Of Art&Design, Caulfield Campus, Monash University (1)

RESOURCE TYPE
Image (12)
Article (4)
Document (3)
Technical Drawing (1)
Collection (1)
More ...

CONTENT TYPE
XML Document (23)
JPEG 2000 Image (13)
JPEG Image (8)
Plain Text (7)
PDF Document (6)
More ...

First « Previous | 1 2 3 | Next » Last

Solivoid Screenshots
a document with images

Document	Size	Format	Download
JPEG Image	234 kB	Image	
JPEG Image	203.8 kB	Image	
Adobe Acrobat PDF	72.8 kB	Adobe PDF document	

Full Title	**Solivoid: Document - spatial research group - core members**
Author(s)	**Faculty of Art & Design, Monash University**
Description	In January 2005, The Spatial Research Group was established at The Faculty of Art & Design at Monash University. The group evolved through a fluid convergence of practitioners and academics, from the disciplines of art and architecture, graphic design and multimedia. It is our shared intention to explore the fringes of the built environment through research based experiments; based on the ideal that art need not be "relegated to something outside and apart from ordinary life but becomes a characteristic of life at its optimum." Thiel. The core members of the group are Darragh O'Brien, architect; Gene Bawden, graphic designer; Jo Dane, interior designer; Saffron Newey, artist; Matt Perkins, artist, Trinh Vu, artist; and Troy Innocent, multimedia artist.
Date	2005
Identifier	arrowdev:1486
Identifier	Please use this identifier to cite or link to this item:**http://arrowdev.lib.monash.edu.au:8081/1959.100/1486**
Resource Type	document
File Format	application/msword
Copyright Type	Faculty of Art & Design, Monash University
Collection	**zzzz Faculty of Art & Design, Monash University - Solivoid collection placeholder** **Solivoid: Document - process and meaning**

Solivoid Screenshots
image information

Document	Size	Format	Download
JPEG 2000 Image	3.3 MB		🖫

Full Title   **Solivoid: Surface - image - hi resolution**

Author(s)   **Faculty of Art & Design, Monash University**

Description   colour photograph containing two images

Date   2005
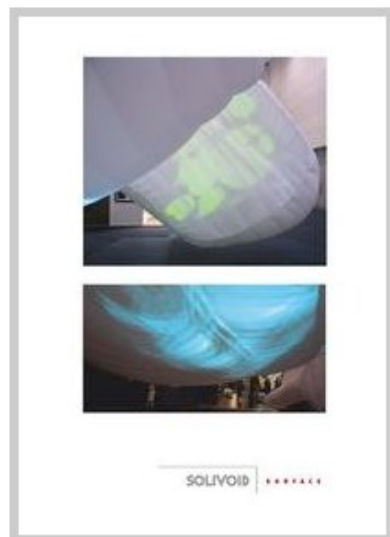
Identifier   arrowdev:1498

Identifier   Please use this identifier to cite or link to this item:http://arrowdev.lib.monash.edu.au:8081/1959.100/1498

Resource Type   image

File Format   image/jp2

Copyright Type   Faculty of Art & Design, Monash University

Collection   **zzzz Faculty of Art & Design, Monash University - Solivoid collection placeholder**

Solivoid Screenshots
Hi resolution before enlarging

[-]   Z O O M   O U T | C E N T E R   I M A G E | Z O O M   I N   [-]

Full Title	**Solivoid: Surface - image - hi resolution**
Author(s)	**Faculty of Art & Design, Monash University**
Description	colour photograph containing two images
Date	2005
Identifier	arrowdev:1498
Identifier	Please use this identifier to cite or link to this item:**http://arrowdev.lib.monash.edu.au:8081/1959.100/1498**
Resource Type	image
File Format	image/jp2
Copyright Type	Faculty of Art & Design, Monash University

Solivoid Screenshots
section of image fully enlarged

[-] ZOOM OUT | CENTER IMAGE | ZOOM IN [-]

Full Title	**Solivoid: Surface - image - hi resolution**
Author(s)	**Faculty of Art & Design, Monash University**
Description	colour photograph containing two images
Date	2005
Identifier	arrowdev:1498
Identifier	Please use this identifier to cite or link to this item:**http://arrowdev.lib.monash.edu.au:8081/1959.100/1498**
Resource Type	image
File Format	image/jp2
Copyright Type	Faculty of Art & Design, Monash University

Solutions and further work

- Presenting images and words that describe these complex research outputs and allowing assessors to look at everything in detail is available now

- These techniques can be adapted and used across a broad range of research

- Challenges involving recorded sound, performance and moving images are still to be explored

- Capturing research and researchers web sites, along with presenting computer software research objects will demand exciting solutions

Monash Mock RQF: Resourcing

- Staff involved
    - 7 people (library staff directly involved)
- Time
    - ≈14,000 man hours to prepare ≈ 4000 research publications
    - About 50% done now

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NZ ─ Performance-Based Research Fund (PBRF)

- Developed by Tertiary Education Committee (TEC)
- Funding research outputs from Tertiary Education Organisations (TEOs) on the basis of their performance.
- Funding model comprises three main elements:
  - Reward and encourage the quality of researchers ─ 60% of the fund
  - Reflect research degree completions ─ 25% of the fund
  - Reflect external research income ─ 15% of fund

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NZ — Performance-Based Research Fund (PBRF)

Data collection

- Quality Evaluation is periodic, in 2006 a partial round was held
- Next round planned for 2012

Import

- Submissions made to TEC
- Copies of evidence forwarded separately as email attachment, or on CD-ROM, DVD etc.

Assessment panel software

- Decision Support System (DSS) used to store the sets of scores and to derive their Quality Categories

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NZ ─ Performance-Based Research Fund (PBRF)

Evidence Portfolio software

- 'Evidence Portfolio (EP) Manager" tool provided to institutions to submit evidence portfolios when unable to create XML as per schema (Link)

  - *"At this stage, the TEC does not anticipate providing any similar EP manager software for the third Quality Evaluation (2012). This is because the TEC expects that either the commercial marketplace or TEOs themselves will provide comprehensive and better-quality solutions for those TEOs that wish to participate in future Quality Evaluations."*

XML schema

- Evidence Portfolios submitted in XML as per schema (Link)

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NZ ─ Performance-Based Research Fund (PBRF)

- XML Schema information collects:
  - Name information
  - Assessment panel identifying information
  - Subject Area identifying information
  - Comments on evidence
  - Peer esteem evidence
  - Research Contribution evidence
  - Location of published research evidence provided as part of an EP

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UK ─ Research Assessment Exercise (RAE 2008)

RAE 2008 is the sixth in a series of exercises conducted nationally to assess the quality of UK research and to inform the selective distribution of public funds for research by the four UK higher education funding bodies. (Link)

- *"The Research Assessment Exercise is a peer review exercise to evaluate the quality of research in UK higher education institutions. This assessment informs the selective distribution of funds by the UK higher education funding bodies."* (Link)

- *"RAE 2008 will provide quality profiles for research across all disciplines. Submissions from institutions will be assessed by experts in some 70 units of assessment. The main body of the assessment will take place in 2007-08, with outcomes to be published by the funding bodies in December 2008."* (Link)

UK ― Research Assessment Exercise (RAE 2008)

Data Collection

Collected data can be submitted by institutions with or without an Institutional Repository (IR)

- RAE 2008 data collection (Link)
  - RAE guidance on submissions (Link)
  - RAE 2008 data collection schemas (Link)
- Reporting using web services (No IR)
  - Updated institution data collection system (web services) (Link)
- Reporting by institutions with an IR (IRRA project) (Link)
  - Institutional Repositories gathering and reporting (Link)

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UK — Research Assessment Exercise (RAE 2008)

IRRA Project ([Link](#))

- A JISC Digital Repositories Programme ([Link](#)) project investigating and developing IR infrastructure for EPrints and DSpace to enable Research Assessment, specifically for the UK Research Assessment Exercise 2008.

  - *"The aim of the IRRA project is to ease the data collection task by embedding it into the processes of the institutional repository."*

  - *"The IRRA project therefore aims to produce a plug-in for the GNU EPrints platform and a separate web application for DSpace designed as a tool to create an institutional RAE publications repository."*

  - White paper ([Link](#))

UK ─ Research Assessment Exercise (RAE 2008)

IRRA Project partners:

- Southampton University (EPrints)
- Edinburgh University (DSpace)

Software development

- Three stages of development: Bronze, Silver and Gold
  - Currently each has produced 'Silver releases' (Link)

Software information in detail

The project software will permit sites to:

- Create an RAE portal for research output and research environment and esteem
- Use their institutional repository:
  - As a repository for all full-text publications that will be electronically submitted into the 2008 RAE by their university
  - Or as a data source for the RAE repository

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UK — Research Assessment Exercise (RAE 2008)

DSpace components:

- A link to their DSpace repository to retrieve author publications and the associated Dublin Core metadata.
- *RAE repository*, a store of RAE metadata and full text files for the output publications, and a link to the local repository unique identifier for the publication to be able to obtain the latest file.

EPrints components:

- A plugin component for the normal repository installation, that manages each user's publication choices and esteem data.
- Web interfaces to manage RAE information.
- An RAE metadata set to describe publications according to HEFCE's requirements.
- A facility to permit export of data into an XML format suitable for submission to HEFCE
- A reporting tool, to provide customisable reports on the publications data

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UK — Research Assessment Exercise (RAE 2008)

Import

- XML data is submitted to a database hosted by HEFCE
- A temporary test site has been set up to receive test data (Link)

Import file formats

The RAE 2008 collection software allows importing of:

- The RAE 2001 submission database format
- XML files, created using a published XML schema
- Delimited text files, e.g. CSV files (amended March 2006) (Link)
- Microsoft Excel (amended March 2006) (Link)
- Microsoft Access database files (amended March 2006) (Link)
- Microsoft Word, by converting to Rich Text Format (RTF)
- EndNote and Reference Manager, using a provided output style

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UK ─ Research Assessment Exercise (RAE 2008)

XML schema

- Information is available (Link)
- XML Schema information collects:
    - Summary information
    - Staff
    - Research outputs
    - Research students and studentships
    - Research Income
    - Textual commentary: (environment and esteem)
        - Confidential staff information
        - Information on UK category 'C' staff

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UK — Research Assessment Exercise (RAE 2008)

Web services

An API interface to the RAE 2008 Data Collection system has been provided (Link)

Supported operations are:

- Import data
- Export data
- Run validation checks
- Retrieve portable document format (PDF) printouts
- Release active locks

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UK — Research Assessment Exercise (RAE 2008)

UK still resolving a number of questions (May 2006): ([Link](#))

- Collection of electronic outputs —
  - Publishers licence to cover everything?
  - In UK 70% of evidence is journal articles, so can Digital Object Identifier's be used?
- No repository? Collection of physical outputs —
  - At the outset?
  - On demand?
  - Central storage?
  - Send to Assessment Panel Secretariat?

Questions?

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