Integrating Repositories into a New Model of Scholarly Communication

Dr Andrew Treloar
Director, Information Management and Strategic Planning, Monash University

ARROW Technical Architect
DART Project Architect

The ARROW Project is funded by the Australian Commonwealth Department of Education, Science and Training, under the Research Information Infrastructure Framework for Australian Higher Education.

arrow.edu.au

The ARROW Consortium comprises Monash University (lead institution), National Library of Australia, The University of New South Wales and Swinburne University of Technology.
Outline
Scholarly Communication
Scholarly Communication

- The world hasn’t always been like this
- Scholarly Journals are a means not an end
- Innovation is possible in (at least) two areas
  - Unit of communication
  - Process of communication
  - Business models (not covered in this talk)

- Unit of communication
    - [http://andrew.treloar.net/research/theses/phd/](http://andrew.treloar.net/research/theses/phd/)
    - New units – see Pathways and DART

- Process of communication
  - Pathways model
Pathways…
Pathways Model

  - [http://www.dlib.org/dlib/september04/vandesompel/09vandesompel.html](http://www.dlib.org/dlib/september04/vandesompel/09vandesompel.html)
- Reconceptualises units of communication and processes of communication
- Proposes a non-vertically-integrated value chain perspective on scholarly communication
Pathways Functions

- **Registration**
  - allows claims of precedence for a scholarly finding.

- **Certification**
  - establishes the validity of a registered scholarly claim.

- **Awareness**
  - allows actors in the scholarly system to remain aware of new claims and findings.

- **Archiving**
  - preserves the scholarly record over time.

- **Rewarding**
  - rewards actors for their performance in the communication system based on metrics derived from that system.
Repositories
Role of Repositories

- **Registration**
  - Time-stamped deposit.

- **Certification**
  - Supports range of peer-review processes as well as open scrutiny.

- **Awareness**
  - OAI-PMH, RSS, SDI, Google.

- **Archiving**
  - Preservation, but not as good as paper (or clay!).

- **Rewarding**
  - Repositories likely to be a large part of RQF and RAE response.
ARROW

- Largely working with post-journal publication materials at present
- Focussed on Awareness and (increasingly) Rewarding
- ARROW response to RQF
  - All “publications” entered into repository
  - Each “publication” has specific metadata fields
    - RFCD code(s)
    - RQF-RFCD code
    - RQF tag (yes, no)
  - Reports in date range generated for each panel
  - Citation and persistent identifier retrieved and exported to panel members
  - Research office attaches factual statements
  - Associated “document” sent to DEST (or repository)
DART

- Built around the Pathways model, with two additions to their processes:
  - Research process
  - Annotation
- Research process
  - Support for collection/storage/collaboration around datasets
- Annotation of datasets, digital objects, publications, annotations, annotators
- and with additional communication units
  - Datasets
  - Annotations
- See [http://dart.edu.au/](http://dart.edu.au/) for more
Integration/Interoperability
Integration/Interoperability

- Persistent identifiers for cross-citations
  - Needed to build OpenURLs that don’t break
- Repository statistics
  - Interoperable Repository Statistics project
- NLA RDS
  - [http://search.arrow.edu.au/](http://search.arrow.edu.au/)
- XACML
  - Common expressions of user and resource attributes
Generic Tools
Generic Tools

- **NOTE**: These should ideally be implemented as web services
- **Name Authorities**
  - For looking up canonical lists of author names, subject headings, etc.
- **ROMEO/Knowledgebank**
  - [http://www.lboro.ac.uk/departments/dils/disresearch/JISC-Advocacy/pages/knowledgebank.html](http://www.lboro.ac.uk/departments/dils/disresearch/JISC-Advocacy/pages/knowledgebank.html)
- **Metadata transforms**
  - Such as OCLC’s Interoperable Core
Questions?