Dissemination or Publication?

Some consequences from smudging the boundaries between research data and research papers

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StORe guide

- Vision and defining features

- Relationship with scholarly publishing

- StORe in an e-Science landscape

- How StORe works

- What else might be in StORe

The StORe vision

- **Seamless transport from research data to research publications and vice versa**

- **Bi-directional links proven in social science e-research but capable of export to other disciplines**

Output

Middle ware

Source
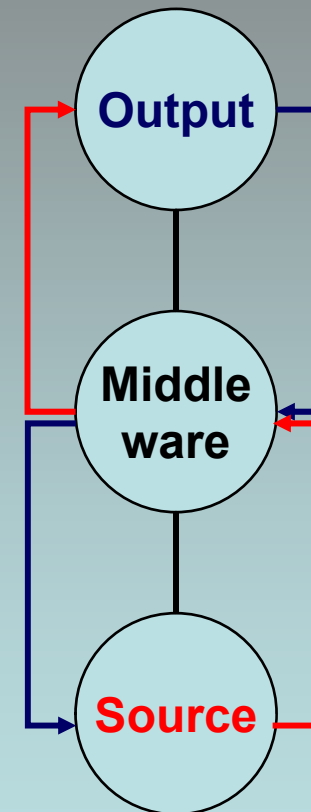
StORe middleware – defining features

Web 2.0 approach, similar to FOAF web services such as Flickr or MySpace, gives control to the researcher

- Permanent links between publications and underlying data
- Federations of institutional repositories and data archives
- Simple process for assignment of metadata
- Searchable metadata assigned at collection level inherited by items within the collection
- Collection owners to add individual items with titles as minimum additional metadata
- Owners to determine which items are public / private
- Owners to form collaborations with colleagues / 'friends'
- Owners to select items for deposit and for publication

To publish

- The production and dissemination of literature or information
- The activity of making information available for public view
- Traditionally, the distribution of printed works
- Recently expanded to include electronic resources – e.g. the electronic versions of books and periodicals, as well as websites and blogs
- Includes development, acquisition, marketing, production (printing and its electronic equivalents) and distribution

Traditional scholarly publication

- Hypothesis
- Undertake research/experiment
- *Produce/manage data*
- Select and organise evidence
- Write/assemble paper
- Submit to peer review
- Apply revisions and produce final draft
- Publish

Making e-data public

- Hypothesis
- Undertake research/experiment
- *Produce data/commence data curation*
- *Publish data ←*
- Select and organise evidence
- Write/assemble paper
- Submit to peer review
- Apply revisions and produce final draft
- Publish paper ←
- Activate data-publication links

[Peer review of data?]

Two-way links - benefits and risks

Opportunities to

- Explore a deeper level of detail
- Validate experiments (*viz Chang's nightmare)*
- Track the use and improvement of research output
- Identify collaborators
- Confirm completeness of information searches
- Supplement published papers

Potential risks from

- Uncertainty of peer review
- Premature dissemination
- Subversion of scholarly paper
- Scavenging
- Lack of interpretative data

Current trends

- **Big science**
  - Astronomy: Virtual Observatory
  - Biosciences: the Wellcome mandate
- **Federations and consortia**
  - IRIScotland
  - EU policy: global knowledge economy (⅔ of €50billion FP7 funding for 'Cooperation')
- **StORe pilot (UKDA/LSE)**

How StORe works

The StORe pilot demonstrator

- Allows publication only if data has been deposited or identified
- Groups items (data and publications) as projects
- Accepts projects based on either primary or secondary analysis
  - Primary analysis creates new data
  - Secondary analysis is based on existing data and may or may not create new data
- Source repository - the UK Data Archive
- Output repository - the LSE's Research Articles Online
- Pilot federation - includes a test institutional repository at the University of Essex

How StORe works

Research Articles Online (Output)	University of Essex (Institutional)			UKDA (Source)
LSE's Own Site	LSE collaborations	Researchers Area	UKDA collaborations	Own Site
Peer-reviewed items in own house style, additional metadata and ID	Items for review (*have IDs of data used and data produced*) LSE approves (*ID added as part of process*)	Items	Items for review (*have IDs of data used*) UKDA verifies (*acquisition number added*) and approves (*ID added*)	Value-added items in own house style, additional metadata and ID

How StORe works

PRESENT SEARCH is across metadata in Essex

- Find an article and you can
    - find the associated data
    - move to the official versions at LSE or UKDA
    - list all articles and related items of the author
- Find data and you can
    - find all articles associated with them
    - e-mail data owner to request access to approved but embargoed/private data

How StORe works

EXAMPLE FUTURE

Essex as multi-disciplined institutional repository in large federation of

- source & output repositories plus
- StORe-enabled institutional repositories at other HE/FE institutions

Providing

- local searches in institutional repositories
- cross-Federation access to all repositories
- individual institutional search indexes merged at the StORe portal
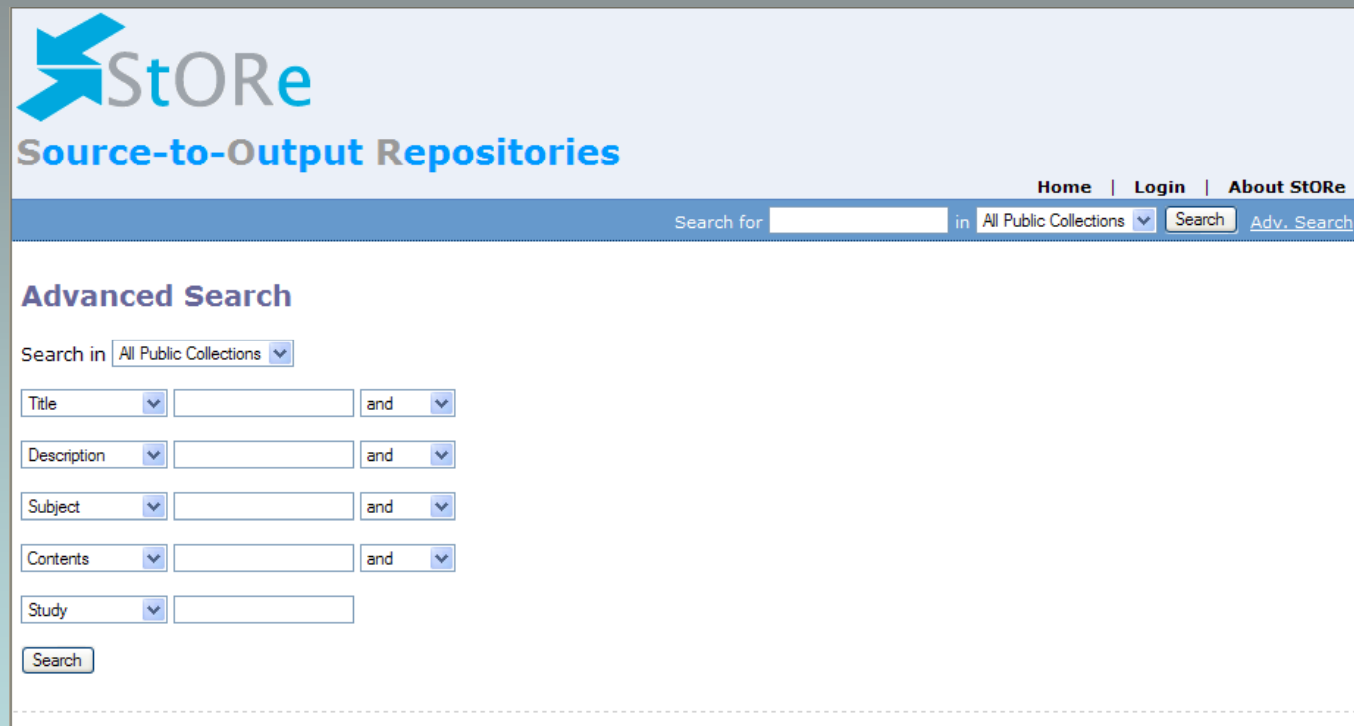
How StORe works

A user can search across all or specific collections without being logged in, using a simple Google-type search…

How StORe works

……or by employing more advanced options

How StORe works

Registered users can also view data within

• Solely owned private or public collections

• Collaborative collections within a federated source or output repository

• Collections to which they are contributor

Making data public with StORe – parallels with traditional processes

- Data deposit in institutional repositories until accepted by source repository

- Source repository verifies data authenticity

- Publication dependent on data deposit and subject to output repository controls

- Access to non-public objects can be restricted and requires authentication

- Release of data can be embargoed

Implications for scholarly publication

- Regulation
  - not strictly open access
  - extent of 'publication' is controlled
- Access control
  - Authentication of users
  - Not based on paying the price
- Researcher rule
- Potential for verifiable research output
- Managed forum for collaborations
- Increased expectation for delivery of research 'package'

Opportunities for 'small science'

- Role for institutional repositories

- Federations – regional or discipline

- StORe middleware

http://jiscstore.jot.com/WikiHome/

Thank you – any questions?