User Perspectives of Metadata Use in Electronic Laboratory Notebooks

Cerys Willoughby, Jeremy Frey, Emma Tonkin, Simon Coles, and Colin Bird
Why do we care about metadata?
Anatomy of an experiment

• Plan experiment
• Enact experiment
• Analyse results
Traditional recording
LabTrove and Automatic capture of metadata

Flexibility has limitations...
LabTrove and User defined metadata
What metadata might we expect?
Number of ‘sections’

- Sections = 1
- Sections 2-5
- Sections 6-10
- Sections 11-20
- Sections >20
Values for section:

- Types of subject:
  - Experiment related
  - Project related
  - Blog related

- Top ten subjects:
  - Materials
  - Methods
  - Data
  - Experiments
  - Experiment stage
  - References
  - Samples
  - Instruments
  - Safety
  - Results
Number of ‘Key value’ pairs

- Metadata Keys = 0
- Metadata Keys = 1
- Metadata Keys = 2
- Metadata Keys = 3
- Metadata Keys = 4
- Metadata Keys = 5
- Metadata Keys = 6
- Metadata Keys = 7
- Metadata Keys = 8
- Metadata Keys = 9
- Metadata Keys = >9
Values for Keys:

- Types of subject:
  - Experiment related
  - Project related
  - Blog related
  - the post type
  - the location of an instrument or experiment
  - a reference to a physical lab notebook (Ref/code)
  - the date of the experiment
  - the status of an activity or document

- Top ten subjects:
  - Materials
  - Instruments
  - Methods
  - Post type
  - Data
  - Experiments
  - Samples
  - References
  - Location
  - Ref/code

RDAP13  https://www.asis.org/rdap/
Research Data Access & Preservation Summit 2013
So what affects the metadata use?
Number of Authors?

![Bar chart showing the distribution of authors with categories from 1 to >5 authors.](https://www.asis.org/rdap/)

- **1 author**: 0.00 sections, 5.00 keys, 10.00 values
- **2 authors**: 0.00 sections, 5.00 keys, 10.00 values
- **3 authors**: 0.00 sections, 5.00 keys, 15.00 values
- **5 authors**: 15.00 sections, 20.00 keys, 25.00 values
- **>5 authors**: 25.00 sections, 30.00 keys, 30.00 values
Public vs private?

Pie chart showing:
- 43% Public
- 48% Private
- 9% Public Logon
- 0% Private Logon

Bar charts showing:
- Sections by blog privacy
- Keys by blog privacy

- Sections: 8 sections, 5 keys, 3 values
- Keys: 0 keys, 1 key, 2 keys
- Values: 1 value, 2 values, 3 values

Legend:
- Public logon
- Private
- Public

URL: https://www.asis.org/rdap/
User perspectives on metadata

• User interviews
• User studies
What can we do about it?
Metadata is essential for intelligent open access