The future of CRIS systems - an interplay with VIVO

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Before we start

• This is a European perspective on Current Research Information Systems (CRIS)
  – Introduction to Current Research Information Systems (CRIS)
  – Overview of CERIF (and quick intro to euroCRIS)
  – Options for interplay with VIVO in a CERIF based CRIS

• Pure is a mature Enterprise CERIF based CRIS system
  – Customers: 50+ in Northern Europe
    • 20 in the UK, 20 in Scandinavia, and rest spread out in continental Europe
  – 4th generation, with a combined life-time of 10 years

“Loved child have many names”
• Current Research Information System
• Research Information Management System
• Faculty Information System
The anatomy of a modern CRIS system

Research Intelligence
- Reporting (on everything)
- Support research assessments
- Collaboration analysis
- In the future: Trends and Comparison/Benchmarking

Meta-data model
- Support maintaining accurate data in a fine-grained and rich meta-data model
- Integrate with many sources
- Maintain history

Research Management
- Track and measure income and output
  - Inputs: Researchers, Funding, Facilities, Collaborations
  - Outputs: Publications, Data Sets, Esteem, Commercial
  - Outcome: Impact (Indicators)
- Support institutional workflows

Exhibition
- Public web-site
- WS/OAI-PMH
- Institutional Repository
The anatomy of a modern CRIS system

Research outputs

Organisational units

Projects

External income

Activities

Data sets

Researchers

Impact

...
• CERIF is basically a “fully normalised” ER-model
  – Use cases are often expressed in SQL-like quires

• CERIF Model Elements
  – Entities (Base-, and Result-, Infrastructure-, 2nd Level Entities)
  – Link entities

• CERIF Features
  – Multiple Language support
  – “Semantics” (model)
  – Measures, Indicators and Federated Identifies
Common European Research Information Format
Common European Research Information Format

= Link Entities =

Source id and destination id
Classification Scheme
Classification
Start date
End date
Fraction
...

Project
- title
- keywords
- Id
- Start date
- End date

OrgUnit
- Id
- Acro
- HeadCount

Person
- Id
- Birthdate
- Gender

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Common European Research Information Format

Additional Information Entities
- Example
- Definition

Additional Structural Entities
- Classification_Classification
- Scheme_Scheme
Pros and Cons of CERIF

Pros
• XML exchange format
• Is a (de facto) standard in Europe
• Is well defined at the model level
• Has a large supporting community

Cons
• It is a fully “normalised” ER model
  – Problematic if implemented directly
• It is complex
• Semantics are not well defined

CERIF is a well proven “model” provided that you de-normalise a bit
euroCRIS governance structure

• Board
  – CERIF Task Group
  – Best Practice Task Group
  – Indicators Task Group
  – Architecture Task Group
  – Linked Open Data Task Group
  – Projects
  – Strategy
  – ....

• Bi-yearly conference
• Members meetings (two times a year)
• TG meetings (ad-hoc)
• First version of CERIF was published in 1991

Task Groups representatives are a mix of vendors, academics and enthusiasts...

More at http://www.eurocris.org/
Collaboration/Networking in a CERIF based CRIS
Interplay with VIVO

• Breaking out of the institutional silo and providing even more tools for researchers using a CRIS
  – Cross-system discovery and linking
    • Collaboration/Networking
    • Related research outputs / data sets / etc
  – Cross-system searching and import

• “Benchmarking”
  – This is stretching things a bit, but ...
Final Thoughts

• CERIF, CASRAI, VIVO, ORCID, ..., and ...
  – Please communicate with each others - there is no reason to reinvent anything

• Exchange and interoperability is pivot
  – Maintenance of “mappings”

• CERIF 1.5
  – http://www.eurocris.org/Index.php?page=CERIF-1.5&t=1

• euroCRIS web-site
  – http://www.eurocris.org/

• Pure
  – http://info.scival.com/pure