

# CC-Interop

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Union Catalog – Services and Tools at users'  
and librarians' disposal

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# Introduction: some logos



University of  
**Strathclyde**



CENTRE FOR DIGITAL  
LIBRARY RESEARCH



[cdlr.strath.ac.uk](http://cdlr.strath.ac.uk)



[www.cs.strath.ac.uk](http://www.cs.strath.ac.uk)



Cooperative Information Research  
Network for Scotland

# Project (1)

- COPAC/Clumps Continuing Technical Cooperation Project
  - COPAC = Consortium of University and Research Libraries (CURL) Opac
  - Clump = set of Z39.50 catalogues with a geographic or subject focus
- May 2002 - April 2004
  - Final Report July 2004
- Funded by UK's Joint Information Systems Committee (JISC)

# Project (2)

- Lead site: London School of Economics and Political Science
  - InforM25 clump (focus: London area)
- MIMAS
  - COPAC
- Centre for Digital Library Research (CDLR)
  - Co-operative Academic Information Retrieval Network for Scotland (CAIRNS) clump (focus: Scotland)
    - Bonus: Scottish Collections Network (SCONE)

# Work package A

- M25 Systems Team & MIMAS
- Technical interoperability between physical and distributed union catalogue architectures
  - Connecting COPAC to M25 clump
  - Connecting clump to clump
    - Z39.50 client as server proxy
- Technical comparison of architectures
  - Implementation of searchable indexes
  - Search results and de-duplication
  - Performance testing

# Work package B

- CDLR in collaboration with RIDING clump (focus: Yorkshire area)
- Overall aim to enhance the role of clumps in the JISC Information Environment
  - Collection description standards requirements
  - Application of collection description to “landscaping” distributed architectures
  - Enhancing the coverage of clumps
  - Cataloguing and indexing standards requirements

# Work package C

- Centre for Research in Library and Information Management (CERLIM) & project partners
- Study of user behaviour relating to union catalogues
  - Study of use of COPAC, InforM25, and CAIRNS in situ (at a local partner institution)
  - Focus groups of library professionals

# Outcomes WPA (1)

- COPAC Z39.50 server added to M25 (and then CAIRNS)
  - Feasibility of adding M25 Z server to COPAC also tested
- JAFER (Java Access to Electronic Resources) open-source software for Z39.50 developed for clump-clump interoperability
  - Proof-of-concept and limited test only
  - Logging, XSLT, target sub-sets within proxy server



# Outcomes WPA (2)

- Identification of common technical interoperability issues and resolutions
  - Independent of union catalogue architecture
  - De-duplication, sorting, ranking, etc.

# Outcomes WPB (1)

- Identification of collection description standards and recommendation for further development
- Application of recommendations to the SCONE database and service
- Mappings and operational interface to output SCONE collection description metadata in various interoperability formats
- Extension of the SCONE infrastructure to RIDING clump
  - Offline test implementation

# Outcomes WPB (2)

- Report on the co-ordination of cataloguing and indexing practices to improve interoperability in union catalogues
  - Independent of architecture
- Implementation of mini- and hyper-clump landscaping in SCONE
  - Mini-clump: User-defined sub-set of Z39.50 catalogues
  - Hyper-clump: Multiple union catalogues with overlapping and duplicate metadata sets

# Outcomes WPC

- Not good for the clumps
  - Awareness, reliability, consistency, contextual support, de-duplication, use of jargon, etc.
- And not good for COPAC!
  - Awareness, contextual support, de-duplication, etc.
- And not good for the users
  - Tend to rely on local collections with instant access, and lack motivation to exploit wider information environments
  - Then there is the fascination of the clickable map ...

# Follow-up (1)

- No CC-interop 2
  - But we still have some hope
- CC-interop represented at UK's Research Information Network seminar on union catalogues (January 2007)
- COPAC technical infrastructure and user interface improved
  - No significant increase in coverage

## Follow-up (2)

- InforM25 user interface improved
  - No significant increase in coverage
- RIDING clump discontinued
- No improvement in co-ordination of cataloguing and indexing standards
  - At COPAC and clump level
  - At UK national level
- Co-ordination of standards for institutional repositories at early stage

# Follow-up (3)

- SCONE and CAIRNS user interfaces improved
- CAIRNS coverage extended to public libraries
  - 50 catalogues now in the clump
- Serials Union Catalogue (SUNCAT) added to CAIRNS
- SCONE coverage extended to institutional repositories and OAI-PMH aggregations
  - Harvesting Institutional Repositories in Scotland Testbed (HaIRST) and Institutional Repository Infrastructure for Scotland (IRI-Scotland) projects

# Thinking globally (1)

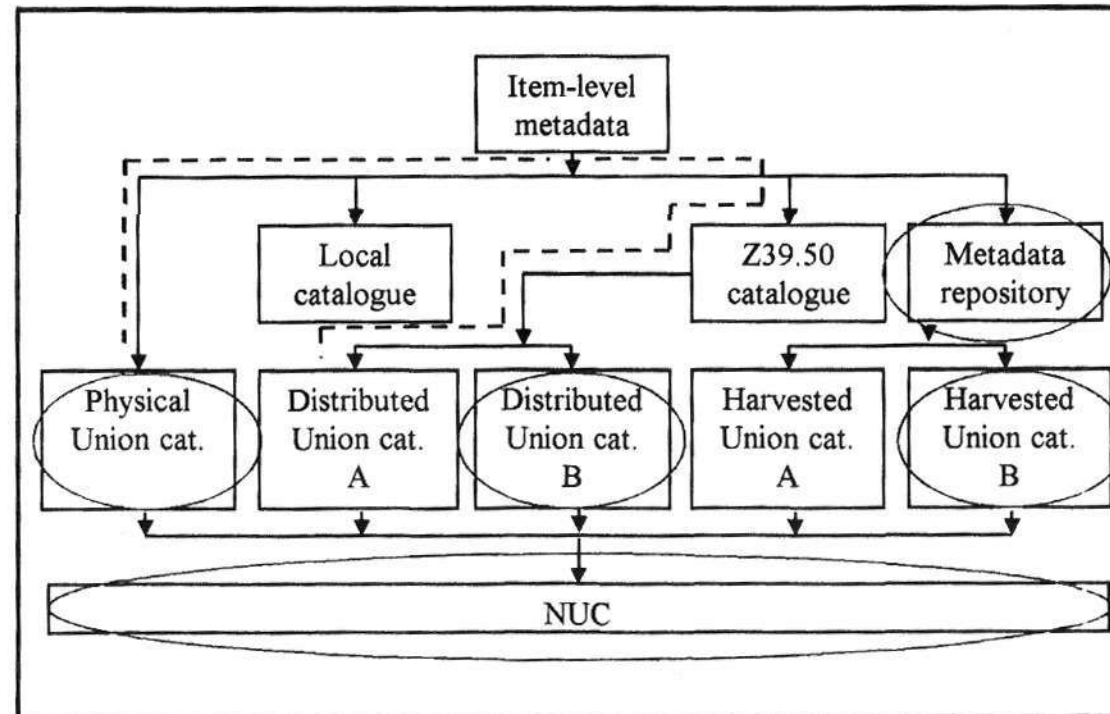
- **Geographical interoperability**
  - With other national and international metadata aggregations
- **Curatorial interoperability**
  - With other library sectors
    - School, public, special
  - To improve cost-benefit and social inclusion
- **Environmental interoperability**
  - With other curatorial domains
    - Archives, museums, digital libraries
  - Common information environments



# Thinking globally (2)

- Architectural interoperability
  - With distributed and physical union catalogues
  - The ultimate architecture is distributed
    - Physical architectures have scaling problems
  - Hybrid architectures increase the number of duplicate metadata records and overlapping record sets
  - Rapid development of institutional repositories and OAI-PMH aggregations increases the complexity of duplicate records
    - Not exact copies; metadata is often processed, so the copy record does not match the local version
      - De-duplication becomes a significant problem for research output produced by staff from more than one institution or published in more than one place or version
    - The aggregated records are not editable

# Complexity of a (hybrid) National Union Catalogue



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Single item metadata can be aggregated repeatedly in physical and distributed union catalogues.

Each aggregation may change the metadata format and/or content.

Each aggregation has its own community, purpose and focus.

# Acting locally?

- Number of university research repositories in Scotland = 5
  - Number planning for interoperability with the university library catalogue = 0
  - Repository usually contains digital resources (eprints, e-theses) while library holds older physical research publications (journals, theses)
  - Often no name or subject authority control in the repository
  - No coherency at the local level, let alone regional or national

# Acting globally!

- IFLA supported standards
  - UNIMARC
  - International Standard Bibliographic Description
  - Functional Requirements of Bibliographic Records, Functional Requirements of Authority Records, Functional Requirements of Subject Authority Records
  - Universal Decimal Classification
- Anglo-American Cataloguing Rules > Resource Description and Access
- Dewey Decimal Classification > DDC translations; WebDewey
- Dublin Core Metadata Initiative
  - Co-ordinating application profiles for structure and content

# Thinking globally, acting locally

- Be prepared to enlarge the scope of the local
  - Local and global are relative
  - Is Scotland a nation, a region, or the cold and wet area at the top of England?
- Recognise the true cost of maintaining local standards
  - Standards supported internationally are cheaper, even if local compromises are necessary

# More thinking globally

- Recognise the true cost of applying any standards locally
  - Skills and training
  - Tools
  - Support
  - Conflict with local goals
    - E.g. to involve non-librarians in metadata creation
- Recognise the advantages of collaboration
  - Sharing the emotional load as well as resource requirements

# Ultimately

- It's not about the catalogue or the cataloguers; it's about the users
- Who expect easy-to-use searching interfaces giving consistent and comprehensive results
- Across the widest possible range of information resources
- But only if they can obtain and use the resources in good time
- Think users, act professionally!

# Links (1)

- CC-interop project website (all reports)
  - <http://ccinterop.cdjr.strath.ac.uk/>
- Scottish Common Information Environment (CAIRNS, SCONE, etc.)
  - <http://scone.strath.ac.uk/scie/index.cfm>
- Research Information Network seminar on union catalogues for the UK
  - <http://www.rin.ac.uk/union-catalogues>
- CDLR website
  - <http://cdjr.strath.ac.uk/>



# Links (2)

- Harvesting Institutional Repositories in Scotland Testbed project website
  - <http://hairst.cdjr.strath.ac.uk/>
- Institutional Repository Infrastructure for Scotland project website
  - <http://www.iriscotland.lib.ed.ac.uk/>
  - Wiki (WP5 documents are public) at:
  - [http://iriscotland.nls.uk/wiki/index.php/Main\\_Page](http://iriscotland.nls.uk/wiki/index.php/Main_Page)
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