Using a Registry to Disclose and Discover Resources for Metasearching

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Outline

• Purpose of JISC Information Environment Service Registry (IESR)
• IESR content description
  – Based on NISO MI but some differences
• IESR services
• Using IESR for metasearch
• The future
Why IESR?

- **JISC Information Environment:**
  - Collections of resources for researchers, learners, teachers in UK

- **Single central registry – m2m access**
  - Improve awareness and access

- **Funded by JISC:**
  - MIMAS, UKOLN, University of Liverpool
  - Registry developed and hosted by MIMAS
IESR Content

- Descriptions of:
  - Collections of resources
  - Informational Services that provide access
  - Agents: Owners / Administrators
  - Transactional Services

- Supplied by resource providers
- Check by IESR content manager
IESR Entities

Service \(\xrightarrow{\text{provides access}}\) Collection \(\xrightarrow{\text{owns}}\) Agent

Collection \(\xrightarrow{\text{administers}}\) Agent
IESR Entity Description

- Entities identified with URI
- Described by metadata
- Based on open standards
- IESR terms defined in IESR namespace
- Metadata defined by Application Profile
  - Semantics
  - Occurrence
  - Searchable
IESR Collection Metadata

- Based on RSLP Collection Description
- Simplification for electronic resources
- Consistent with:
  - DCMI Collection Description Application Profile
  - NISO MI Collection Description
Vocabulary Encoding Schemes

• Defined in Application Profile
• Single backbone subject scheme
  – Dewey Decimal Classification System
• Other common vocabularies supported
• iesr:usesControlledList
  – IESR defined list (extensible)
  – terminology service; item level search
Title: ESDS International Macro data

Collection Id: http://purl.org/poi/iesr.ac.uk/108445753-12967

Coll Description: ESDS International provides web based access to a range of macro-economic datasets. Macro data are data aggregated to a country or regional level. The macro databanks in ESDS International all contain socio-economic time series data for a range of countries over a substantial time period. Many of the databanks are the current releases of the major statistical publications produced by intergovernmental organisations such as the World Bank, International Monetary Fund or United Nations. Topics covered include national accounts, industrial production, employment, trade, demography, human development and other indicators of national performance and development.

Collection Type: Collection.Dataset.Subject.

Format: Data available for download in Beyond 20/20 WDS is available in *.csv, * .txt or * .xls format. Data available for download in SearchNS is available in Space separated, Comma separated, SPSS, SAS and mini tab.

Language: on

Coll hasService: http://purl.org/poi/iesr.ac.uk/108444580-10955

Coll Copyright: Copyright information is available for each separate dataset within the collection.

Coll Use Rights: During the online ESDS registration process users have to agree to the following end user licence before being allowed access to the data: http://www.esds.ac.uk/registration/licence_idr.asp

Coll Access: Available to UK FE and HE. Conditionally free. Registration required.

Subject (HASSET): Economics; Industry and Management; Social Structure and Stratification; Employment and Labour

Spatial (HASSET): Africa; America; Arab Countries; Asia; Atlantic Ocean Territories; Australasia; Commonwealth; Europe; Indian Ocean Territories; Mediterranean Countries; Oceania; Western Hemisphere

Temporal: 1948/

Uses Ctrid List: LOCAL

Coll Owner: http://purl.org/poi/iesr.ac.uk/108445246-9103

Coll isPartOf: http://www.esds.ac.uk/

hasAssociation: http://www.esds.ac.uk/International/access/micro.asp

hasPublication: http://www.esds.ac.uk/International/access/macro.asp
IESR Service Metadata

- More than RSLP CD ‘locator’
- Bespoke IESR scheme to support discovery and registry application
- Single access method:
  - Z39.50, SOAP, OAI-PMH, Web/CGI
- Location URL
- Interface property for some service types using appropriate schema
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<th>4</th>
</tr>
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<td>SOSIG Internet Resource Catalogue Open Archive</td>
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<tr>
<td>Service Id</td>
<td><a href="http://purl.org/poi/iesr.ac.uk/1064526719-17787">http://purl.org/poi/iesr.ac.uk/1064526719-17787</a></td>
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Other Service types

- **SOAP:**
  - Locator: access URL
  - Interface: WSDL
- **OAI-PMH:**
  - Locator: BaseURL
  - Interrogate service (Identify) for details
- **OpenURL:** Locator: BaseURL
- **Web CGI:** Interface: arguments
- **Web page:** Locator: URL
IESR Agent and Administrative Metadata

• Agent: contact details
• Administrative:
  – Included with every entity
• IESR includes:
  – creating organisation, publisher: IESR
  – latest modification date
  – rights to reuse descriptions: Creative Commons
IESR Services

• Z39.50
  – Search via Bib-1 attributes
  – Results: text (SUTRS); XML
• OAI-PMH for harvesting
• OpenURL Link-To Resolver
  – Referent identifier
  – Dublin Core metadata format, e.g. type Collection
  – Implements IESR identifier resolution
• Web Search and Browse
Future Services

• Web Services SOAP / SRW (planned)
• RSS
• UDDI (under investigation)
  – Mapping IESR data to UDDI
  – Prototype registry
  – Is there a requirement?
• Data ingest
IESR XML

• **Composite Collection record via Z39.50:**
  - Collection
  - All services that provide access
  - All agents:
    - Owners of collection
    - Administrators of services

• **Single entity record via OAI-PMH**
• **Simple Dublin Core for Interoperability**
Using IESR

• Portal
  – amalgamated set of resources

• IESR provides:
  – Discovery of resource collections
  – Up-to-date details of access to collections

• Using IESR Portal builder can:
  – Add new services to portal
  – Provide metasearch
Portal Metasearch Example

- Social Science portal discovers collections with e.g. Z39.50 services
- Provides cross-search to end-user using e.g. Z39.50
- Portal builder doesn’t need to know about all resources
- Users discover collections unaware of
Harvesting IESR

- OAI-PMH allows replication of IESR
- Portal harvests IESR records
- Caches locally for use by portal software, e.g.:
  - Local service registry
  - Knowledgebase after conversion to appropriate format
  - Conversion into local configuration file
Other Uses

• Portal Links to Web Search
  – General resource discovery

• Reuse collection description
  – Initially created by resource supplier
  – Shared by multiple registries and applications

• RSS Aggregator (news; data alerts)
  – Personal digital library portal

• Discover OpenURL Resolvers
Distributed Service Registries

- **Scope of IESR**
  - JISC, UK, international?
  - Data ownership
  - Scalability and maintenance

- **Distributed model**
  - Each node describes own resources

- **IESR collaboration with OCKHAM in US**
  - Searching is local
  - Replication by OAI-PMH harvest
Federated Service Registries

• Federated model
  – Each node describes own resources
  – Each node maintains own registry

• How to search federated registry?
  – Metasearch
  – UDDI
  – Aggregate by OAI-PMH harvest
Standard Metadata Schema

- Sharing collection descriptions
  - Need common metadata schema
  - Or a derivable schema
- NISO Metasearch Initiative Collection Description
  - Provides a common core
  - Basis of IESR and OCKHAM descriptions
- IESR a practical example application
  - Feedback to NISO MI and DCMI CD
IESR Future

- Current phase until July 2006
- More and updated content
- New IESR services
- Demonstrating viable IESR use
- Maintenance of metadata schema
- Persistence of content
IESR Details

Specifications: http://iesr.ac.uk/metadata/
Application Profile: http://iesr.ac.uk/profile/
XML Schema: http://iesr.ac.uk/schemas/iesr.xsd
Web Search IESR: http://iesr.ac.uk/registry/
Z39.50 service: http://iesr.ac.uk/use/z3950/
OAI-PMH service: http://iesr.ac.uk/use/oaipmh/
IESR Helpline service: iesr@mimas.ac.uk

Ann Apps: ann.apps@manchester.ac.uk