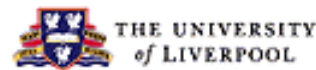


IESR Interfaces: Current Services and Future Plans

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JISC IE Service Registry



- JISC Information Environment:
 - Collections of resources for academia
- Single central registry - m2m access
 - Services that provide access
 - Possible uses of IESR
- Funded by the JISC:
 - MIMAS, UKOLN, University of Liverpool
 - Prototype Registry developed at MIMAS

IESR Services



- Z39.50
- OAI-PMH (soon)
- OpenURL 'Link -To' Resolver (soon)
- Web Services SOAP (SRW) planned
- RSS (later)
- UDDI (under investigation)
- Web Search and Browse

IESR Z39.50 Service



- Access details on web site
- `z3950s://iesr.ac.uk:2227/iesr`
- Search on Bib-1 attributes
- Result syntax:
 - SUTRS (Brief and Full); GRS1(TagSet-G)
 - XML - Dublin Core
 - XML - IESR (ElementSetNames: IESR)

Z39.50: XML / DC: CIMI DTD



```
<record-list> <dc-record><title>zetoc</title> ...
  <relation>http://purl.org/poi/iesr.ac.uk/1084445578-11684</relation>
  <relation>http://purl.org/poi/iesr.ac.uk/1084445214-8867</relation>
</dc-record>
<dc-record><title>zetoc Z39.50 search</title> ...
  <identifier>http://purl.org/poi/iesr.ac.uk/1084445578-11684</identifier>
  <relation>http://purl.org/poi/iesr.ac.uk/1084445246-9103</relation>
</dc-record>
<dc-record><title>The British Library</title> ...
  <identifier>http://purl.org/poi/iesr.ac.uk/1084445214-8867</identifier>
</dc-record> </record-list>
```

Z39.50: IESR XML



- Composite Collection record:
 - Collection
 - All services that provide access
 - All agents:
 - Owners of collection
 - Administrators of services
- Composite Transactional Service record:
 - Service and all administrator agents

IESR for Portals



- Portal: amalgamated set of resources
 - cross-searching, harvesting
- IESR provides:
 - Discovery of resource collections
 - Up-to-date details of access to collections
- Using IESR, portal could:
 - Cross-search including collections
 - Link to collection web pages
 - Harvest IESR data

IESR Z39.50 Use Scenario



- Physics Portal searches for collections
- Result includes service descriptions
- Portal selects collections with Z39.50
- Provides to end-user cross-search over Z39.50-enabled collections
- May include collections user unaware of
- Portal doesn't need own registry

IESR OAI-PMH Service



- OAI-PMH version 2.0
- Verbs: Identify; ListMetadataFormats; ListIdentifiers; ListRecords; GetRecord
- Formats: Dublin Core (oai_dc); IESR
- Separate entity records
- Admin metadata in 'about'

OAI-PMH DC



```
<OAI-PMH xmlns="..." ...>
<responseDate>2004-12-20T14:12:00Z</responseDate>
<request verb="GetRecord" identifier="oai:iesr.ac.uk:1084445955-
  14535" ...>http://iesr.ac.uk/search/iesroai</request>
<GetRecord> <record> <header>...</header> <metadata>
<oai:dc:dc xmlns="..." ...>
<dc:title>zetoc</dc:title> ...
<dc:identifier>.../poi/iesr.ac.uk/1084445955-14535</dc:identifier>
<dc:identifier>[By reference OpenURL pointer]</dc:identifier>
<dc:relation>.../poi/iesr.ac.uk/1084445578-11684</dc:relation> ...
</oai:dc> </metadata> <about>...</about> </GetRecord>
</OAI-PMH>
```

OAI-PMH IESR XML



- Single entity record:
 - collection; service; agent
- Admin metadata in 'about'
- Potentially allows replication of IESR and subsequent maintenance

Portal OAI-PMH Use



- Portal harvests copies of IESR records (some or all)
- Caches locally for use by portal software, for example by:
 - ingesting into local service registry
 - ingesting into portal 'knowledgebase' after conversion into appropriate format
 - conversion into local configuration file

MIMAS Metadatabase



- MIMAS Metadatabase is a catalogue of resources provided by MIMAS
- Staff reluctant to maintain 2 sets data
- Metadatabase will:
 - Harvest changed IESR records nightly
 - Select MIMAS records
 - Update Metadatabase

RSS Use Scenario



- RSS services described in IESR may be:
 - News feeds, often created manually, simple data fields
 - New data alerts, eg. journal ToCs, composite data fields (DC, PRISM)
- RSS Aggregator:
 - Discover RSS feeds in subject area
 - Create aggregated RSS feed

RSS Aggregator



- Examples:
 - JISC news service
 - Science Journals ToCs syndication
- Get IESR records by OAI-PMH / Z39.50
- IESR may have RSS interface in future
- Eg. harvest into Urchin
- D-Lib Article Dec 2004 (T.Hammond)

OpenURL 'Link-To' Resolver

- Standard way of passing description of a resource
- Enables link to appropriate copy of article
- Also server-to-server communication
- IESR OpenURL: retrieve single entity
- OAI-PMH XML/DC records will include OpenURL: by-ref link to IESR XML

OpenURL Example



```
http://iesr.ac.uk/service/ourllinkto?  
url_ver=Z39.88-2004  
&url_ctx_fmt=info:ofi/fmt:kev:mtx:ctx  
&rft_id=http://purl.org/poi/iesr.ac.uk/1084445595-14535  
&svc_val_fmt=info:ofi/fmt:kev:mtx:dc  
&svc.format=text/xml  
&svc.type=Collection
```

Web Services / SOAP



- W3C server-to-server protocol
- Request and response messages: XML
- Wrapped in SOAP XML envelope
- Understood by both servers
- Interface defined by WSDL file
- Implementation independent
- IESR SOAP will be over CGI

Standard Web Services Interfaces



- Many Web Services application interfaces are proprietary
- SRW (Search - Retrieve - Web)
 - Common Query Language
 - Simplest form based on DC (query in dc:title)
 - Definition of fields within result set
 - Support for simple Dublin Core encouraged
- NISO VIEWS

IESR SOAP Service



- Design request and response messages
- Manage results sets (SRW):
 - Hits; Start / Next positions; Record number
- Dublin Core - with pointer to IESR XML
- IESR XML record:
 - Composite record as for Z39.50
 - Single entity record

IESR Web Services Use



- Similar to previous scenarios
- Mix and Match
 - Discover Web Services via OAI-PMH or Z39.50
 - Discover OAI-PMH, RSS, etc services via SOAP
- Usage may be enhanced by IESR UDDI

UDDI



- Standard protocol for Registry of businesses and services offered - generally Web Services
- XML grammar:
 - data about business and services
- Used mainly by e-business at present
- Centralised registries, dynamically accessible
- Access by SOAP
- Discovery and publicising of services on offer

IESR UDDI Service



- Under investigation by UKOLN
- Mapping of IESR data to UDDI
- Prototype UDDI registry - sample data
- Development of UDDI version of IESR in next phase depends on:
 - This investigation
 - Stakeholder requirement

IESR Service Details



Web Search IESR: <http://iesr.ac.uk/registry/>

IESR Z39.50 service:
<http://iesr.ac.uk/registry/docs/iesrZ3950.html>

IESR Helpline service: iesr@mimas.ac.uk

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