

Draft mapping from MICHAEL data model to the JISC's Information Environment Service Registry (IESR) Metadata Application Profile

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Sources

MICHAEL data model - definitions, received from Kate Fernie, MLA, 29 March 2005

IESR Application Profile, version 2.4, 2005-01-25

<http://www.iesr.ac.uk/profile/>

IESR: Data Creation Guidelines for IESR Records, version 1.0, 2003-09-30

<http://www.iesr.ac.uk/metadata/guidelines/>

Note: the IESR project is due to review the IESR AP in the coming weeks, so there may be (hopefully minor) changes to the mapping described in this document.

General Comments

The JISC IE Service Registry is designed explicitly to be a machine-oriented application i.e. it is intended primarily to support other software applications. While some data in IESR metadata records is intended for presentation to human readers (by other presentational services), much of the data (particularly in the service descriptions) will not be presented to a human reader, but rather will be used by applications to discover and select services with which to interact and to condition their interactions with those selected services. For some types of service (e.g. application-specific SOAP interfaces described in WSDL) human intervention will always be required to interpret the service description and configure the client application accordingly; for other types of service, the client can configure itself using the service description data.

While the MICHAEL data model captures descriptions of services, my understanding is that MICHAEL is being developed at least primarily to support human-readable interfaces, and the schema places more emphasis on human-readable description that is not always directly mappable to the IESR metadata schema.

Entity Types

Michael Entity Type	IESR Class	Notes
Digital Collection	iesr:Collection	
Physical Collection		
Service/Product	iesr:Service	
Institution (Agent)	iesr:Agent	
Institution (Location)		
Programme	iesr:Agent	
Project	iesr:Agent	

MICHAEL Institutions and IESR Agents

If a MICHAEL Institution entity is an Agent, and it is the owner of a Collection or the administrator of a Service, then it corresponds to an Agent entity in IESR AP.

IESR AP does not record the Location of a Physical Collection.

MICHAEL Projects/Programmes and IESR Agents

If MICHAEL Projects/Programmes are the owners of Collections, or the administrators of Services, then they correspond to Agents in the IESR AP.

If Programmes/Projects do not have these relationships with Collections or Services/Products, then, even though they may be Agents in the general sense, they are outside the scope of the entities described by the IESR AP.

Generally, Agent descriptions in IESR AP are very simple: they provide a name of and a means of contacting an Agent responsible for the ownership of the Collection or the administration of the Service. MICHAEL Programme/Project descriptions provide additional human-readable information about the activity of the agent e.g. digitisation.

MICHAEL Services/Products and IESR Services

While I think the MICHAEL definition of Service/Product is compatible with IESR's definition of Service, I also think that some of the types of resource that MICHAEL is describing as Service/Product (e.g. CD-ROMs etc) are outside of the scope of what IESR has considered in terms of Services. That subset of MICHAEL Service/Products are probably out of scope in terms of usefulness to applications using the IESR: e.g. I'm not sure how useful it is for a PNDS portal to discover that a collection is available on CD ROM?

Conversely, IESR's definition of Service includes "transactional" services, that do not provide access to Collections. I think it is the case that the MICHAEL definition of Service/Product does not include "transactional" services i.e. all MICHAEL Service/Products are associated with a Collection.

Digital Collection

IESR AP Class: iesr:Collection

Attributes

Michael Field	IESR AP Property	IESR AP Encoding Scheme	Notes
identifier	dc:identifier	dcterms:URI	Mandatory. IESR AP requires that a collection has exactly one identifiers and that it is a URI. The current input process generates a URI if none is provided. IESR AP does not record non-URI identifiers.
Title	dc:title		Mandatory.
description	Dcterms:abstract		
language	dc:language	dcterms:RFC3066	
digital-format	dc:format		
digital-type	dc:type	dcterms:DCMIType rslpcd:CLDT	IESR AP uses the dot notation for rslpcd:CLDT value strings
content-type	dc:type	michael:ContentType	(Would need to extend list of type encoding schemes in IESR AP)
Size	dc:format		
accrual			
Standards			
Related database			
legal status	dcterms:rights		
Category	dc:subject	michael:Category	(Would need to extend list of subject encoding schemes in IESR AP, or supply as keyword with no encoding scheme)
Subject	dc:subject	dcterms:DDC iesr:HASSET	IESR AP requires at least one subject term, and

		iesr:JACS dcterms:LCSH dcterms:MESH dcterms:UDC iesr:UNESCO	recommends that at least one DDC subject is provided (Dewey DC) MICHAEL is proposing to use UNESCO
spatial-coverage	dcterms:spatial	iesr:HASSET dcterms:ISO3166 dcterms:LCSH dcterms:TGN iesr:UNESCO	May need to map MICHAEL encoding scheme to one of IESR schemes e.g. dcterms:ISO3166
famous people	dc:subject		person is subject of collection
famous event	dc:subject		event is subject of collection
famous place	dc:subject		place is subject of collection
famous object	dc:subject		object is subject of collection
Culture	dc:subject		
temporal-coverage	dcterms:temporal	? dcterms:W3CDTF	
Period	dcterms:temporal		temporal coverage of the content
start-date	dcterms:temporal		
end-date	dcterms:temporal		
Access control	dcterms:accessRights iesr:useRights		
Illustration			This is an item illustrating the content of the collection... usually an image but can be other media.

Relations between Digital Collection and Other Entities

Subject Entity	Relation	Object Entity	IESR AP Property
Digital Collection	is-owned-by	Institution (Agent) ? Project	rslp:owner
Digital Collection	is-collected-by	Project	
Digital Collection	is-made-available-by	Service/Product	iesr:hasService

Digital Collection	is-derived-from	Physical collection	
Digital Collection	is-part-of	Digital Collection	dcterms:isPartOf
Digital Collection	has-association	Digital Collection	rslp:hasAssociation

Properties used in IESR AP with no equivalent in MICHAEL data model

<i>IESR AP Property</i>	<i>IESR AP Encoding Scheme</i>	<i>Definition/Comment</i>	<i>Obligation</i>
iesr:useRights		A statement about allowed usage of data from the collection, for example terms and conditions.	Optional
iesr:usesControlledList	iesr:CtrlVocabsList	A classification scheme or thesaurus used by the collection.	Optional
dcterms:educationLevel	iesr:UKEL	Education level of group for whom the collection is intended or useful	Optional
dcterms:isReferencedBy		A publication that provides more information about the collection, such as a general information webpage; a help guide for using the collection; a report based on the use, study, or analysis of the collection	Optional

Service/Product

IESR AP Class: iesr:Service

See note above re MICHAEL Service/Product and IESR Services.

Attributes

Michael Field	IESR AP Property	IESR AP Encoding Scheme	Notes
Identifier	dc:identifier	dcterms:URI	Mandatory. IESR AP requires that a service has exactly one identifier and that it is a URI. The current input process generates a URI if none is provided. IESR AP does not record non-URI identifiers.
Title	dc:title		Mandatory.
Description	dcterms:abstract		
Language			
Maintenance	? dcterms:abstract		
Audience			
legal status			
Access type	? dc:type	? michael:ServiceType	(Would need to extend list of type encoding schemes in IESR AP)
accessibility			
WAI	? iesr:supportsStandard	? iesr:StdsList	Would need to extend iesr:StdsList encoding scheme to cover WAI
Access conditions	dcterms:accessRights	iesr:AuthList?	Will need to extend MICHAEL list to cover iesr schema
comment-access-conditions	?		
technical requirements	?		This allows you to describe anything (eg a plugin) that you need in order to open a

			file accessed from a location.
technical description	iesr:interface		A WSDL document, Zeerex document, or IESR keys document Will need to specify MICHAEL records link to these documents as appropriate
protocol	dc:type iesr:supportsStandard	iesr:AccMthdList iesr:StdsList	
access-location/description	?		This is a free text description of the location, which could be offline.
access-location/locator	rslp:locator		

Relations between Service/Product and Other Entities

Subject Entity	Relation	Object Entity	IESR AP Property
Service/Product	is-administered-by	Institution (Agent) ? Project	rslp:administrator
Service/Product	makes-available	Digital Collection	iesr:serves

Properties used in IESR AP with no equivalent in MICHAEL data model

IESR AP Property	IESR AP Encoding Scheme	Definition/Comment	Obligation
iesr:output	dcterms:IMT	Output format available from the service Expected values would be: text/html; text/xml; application/xhtml+xml	Optional
iesr:logo		A logo for the service This is a URL that will yield a graphical logo when displayed on a web page	Optional

For a Z39.50 target, the iesr:interface property provides a Zeerex description

For a SOAP-based service, the iesr:interface property provides a WSDL description

For a SRW/U service, iesr:interface properties should provide both a Zeerex description and a WSDL description. (At present I think it only requires a Zeerex doc, but it should provide both.)

For an example of an IESR description of an OAI-PMH repository see

<http://www.iesr.ac.uk/metadata/examples/svcoai.xml>

For an example of an IESR description of a Z39.50 target repository see

<http://www.iesr.ac.uk/metadata/examples/svcz3950.xml>

For an example of an IESR description of an SRW target see

<http://www.iesr.ac.uk/metadata/examples/svcsrw.xml>

For an example of an IESR description of a SOAP-based service see

<http://www.iesr.ac.uk/metadata/examples/svcsoap.xml>

Institution (Agent)

IESR AP Class: iesr:Agent

See note above re MICHAEL Institutions and IESR Agents.

Attributes

<i>Michael Field</i>	<i>IESR AP Property</i>	<i>IESR AP Encoding Scheme</i>	<i>Notes</i>
identifier	dc:identifier	dcterms:URI	Mandatory. IESR AP requires that an agent has exactly one identifier and that it is a URI. The current input process generates a URI if none is provided. IESR AP does not record non-URI identifiers.
logo	iesr:logo		
name	dc:title		Mandatory.
acronym			
jurisdiction			
institution type			
administrative status			
address/street			
address/pobox			
address/locality			
address/region			
address/country			
address/postcode			
URL	dc:relation		
telephone	iesr:phone		
fax			
email	iesr:email		

Relations between Institution (Agent) and Other Entities

<i>Subject Entity</i>	<i>Relation</i>	<i>Object Entity</i>	<i>IESR AP Property</i>
Institution (Agent)	Administers	Service/Product	iesr:administers
Institution (Agent)	Owns	Digital Collection	iesr:owns

Project/Programme

IESR AP Class: iesr:Agent

See note above re MICHAEL Projects/Programmes and IESR Agents.

Attributes

Michael Field	IESR AP Property	IESR AP Encoding Scheme	Notes
identifier	dc:identifier	dcterms:URI	Mandatory. IESR AP requires that an agent has exactly one identifier and that it is a URI. The current input process generates a URI if none is provided. IESR AP does not record non-URI identifiers.
logo	iesr:logo		
title	dc:title		Mandatory.
acronym			
description	dc:description		
digitisation process			
funding type			
email	iesr:email		
URL	dc:relation		
start-date			
completion-date			
project status			

Relations between Project/Programme and Other Entities

Subject Entity	Relation	Object Entity	IESR AP Property
Project/Programme	Administers	Service/Product	iesr:administers
Project/Programme	Owns	Digital Collection	iesr:owns

Properties used in IESR AP with no equivalent in MICHAEL data model

<i>IESR AP Property</i>	<i>IESR AP Encoding Scheme</i>	<i>Definition/Comment</i>	<i>Obligation</i>
iesr:phone		Telephone number of agent. Global international telephone number beginning '+' is preferred	Optional