



The Ultimate Registry Service Component

Andreas Stanescu
Software Architect



Agenda

- Make the library community aware of the existence of an open source registry engine ready to be used
- Can be used out of the box to build new collections with no database development
- Powers the Registry Services program at OCLC, including GDFR, the Institutions Registry, and many others

Background

- Funded by the Global Digital Format Registry (GDFR) project
- The Harvard University Library has received a grant from the Mellon Foundation for a two year project leading to the deployment of the GDFR
- Required to be extensible, distributed, capable of replicating records for permanent availability
- Must be based on open standards, open protocols
- Must be made available open source

Registry Paradigm

- We are surrounded by collections of items:
 - Phone and email contacts
 - Yellow Pages
 - CD, DVD, book collections
 - Policies, clients, patrons, roles, expertise
 - Rights, licenses, activities
- Think in terms of collections of items, instead of databases of data
- Then, relate items in new and novel ways into “mash-ups”
- Relational Objects, not relational databases

Registry Paradigm (cont.)

- For example, GDFR defines a number of types:
 - Format
 - Agent
 - Process
 - File
 - Document
 - IP Restriction
 - Holding
- The model grows by adding new collections of related objects, which are then included in mash-ups by simply changing XSL scripts

Important Characteristics

- Jeff Young's IWSA = Interoperable Web System Architecture
- Three important characteristics
 - Permanently Identifiable IWSA resources
 - Simple pattern for URL naming
 - Standard list of available services at different levels (registry, collection, item)

Three Important Characteristics (#1)

■ #1 - Permanently Identifiable IWSA Resources

- Registry: info:iwsa/{*GlobalSystemLabel*}
- Collection: info:iwsa/{*GlobalSystemLabel*}/{*CollectionLabel*}
- Item: info:iwsa/{*GlobalSystemLabel*}/{*CollectionLabel*}/{*ItemLabel*}

Three Important Characteristics (#2)

■ #2 - Simple pattern for URL naming

■ Web services pattern:

- Registry: <http://woldcat.org/webservices/registry>
- Collection:
<http://woldcat.org/webservices/registry/search/Institutions>
- Item:
<http://woldcat.org/webservices/registry/content/Institutions/12345>

■ User Interface pattern:

- Registry: <http://woldcat.org/registry>
- Collection: <http://woldcat.org/registry/Institutions>
- Item: <http://woldcat.org/registry/Institutions/12345>

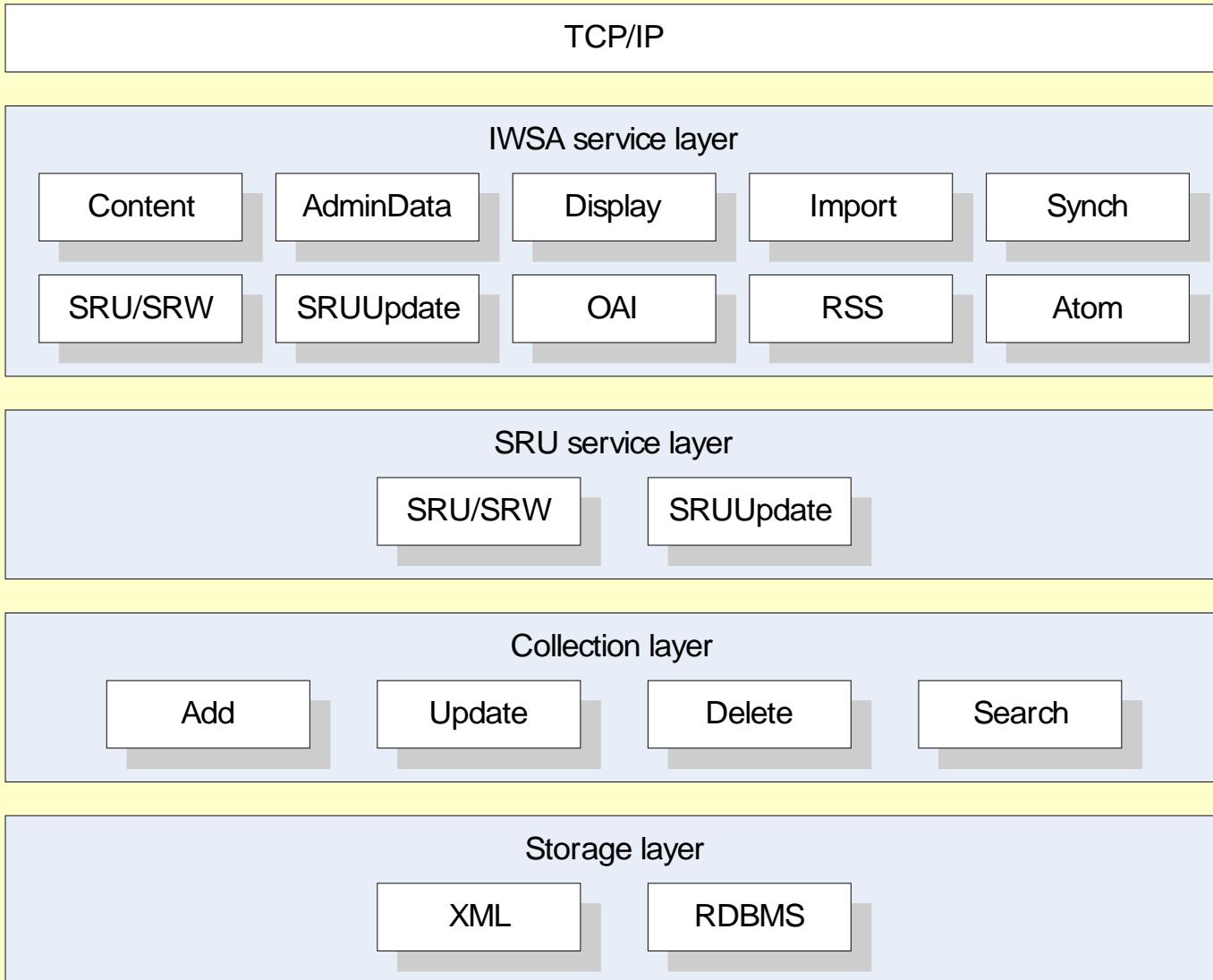
Three Important Characteristics (#3)

- #3 - Standard list of available services
- Registry level services:
 - *listServices, authenticate, display, content, adminData*
- Collection level services:
 - *listServices, display, content, adminData, sru, sruUpdate, formProcessor, create, import, oai, rss, atom*
- Item level services:
 - *listServices, display, content, adminData, edit, crosswalk, history, diff, atom, rss*

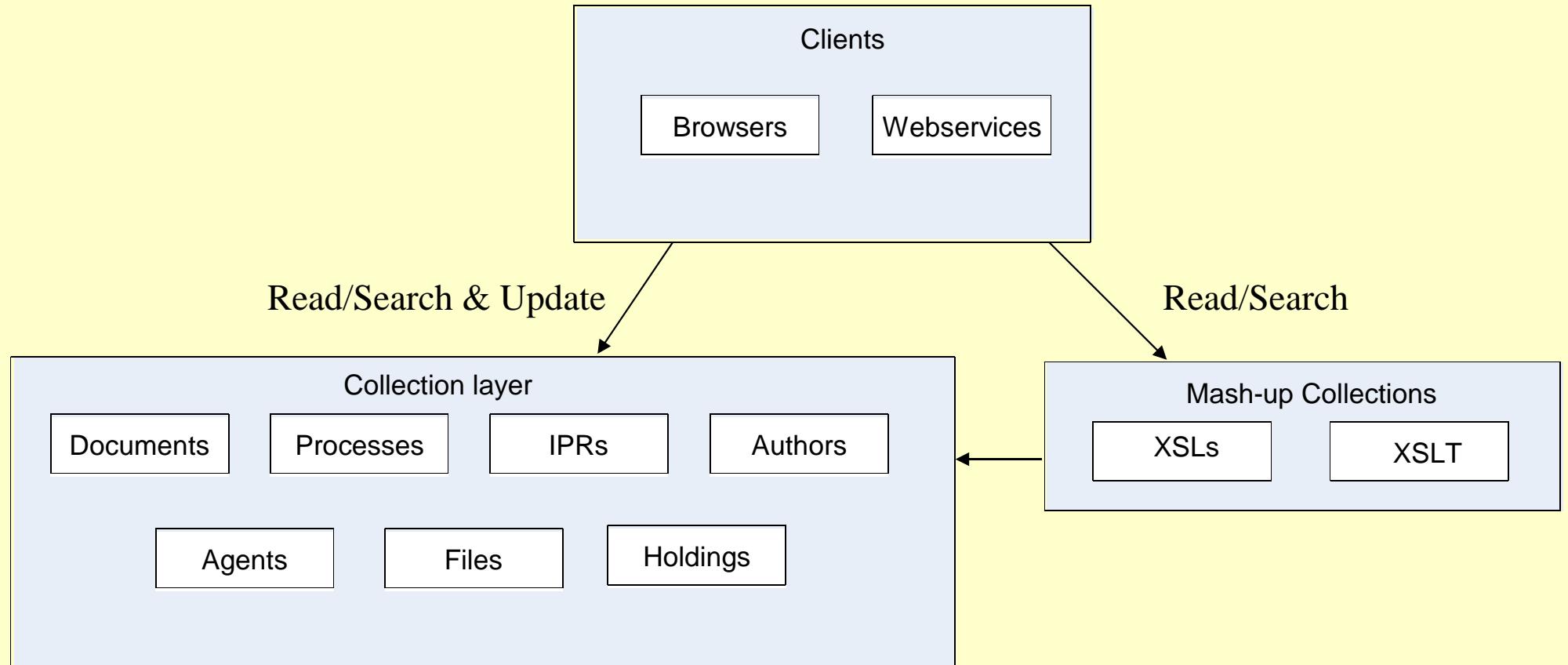
Two Important Resulting Features

- “Hackable” URLs
- Mechanized workflow generation
 - Mash-ups can be orchestrated easier because the identifiers to collections and services follow well-known patterns

Design Model



Mash-up Model



Enormous Flexibility

- Build new collections by simply uploading XML Schema (XSD) definition files
- Eliminate development time for database development, configuration, deployment and testing
- Dynamically adapts indexing, searching, loading and harvesting capabilities based solely on the records' XSDs
- Focus development time only towards user interface and integrations with existing systems

Software Demo

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Profile Summary

Collections collection record version 1.0

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XML](#)

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Collection Name: Collections

Local Identifier Type: dataDerived

Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** false
- **Default Schema URI:**
<http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/collection>
- **Description:** Collections Collection
- **Abstract Elements:**
 - /index-root/col:collection/collectionName
 - /index-root/col:collection/adminEmail
- **XSDIdentifierXPath:** /index-root/col:collection/collectionName
- **XSDRootElement:** col:collection
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string

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Search results for 'cql.any = ***'

Displaying Records 1-3 out of 3

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<< First < Prev 1 Next >

collectionName	adminEmail
1. Collections	mailto:brian_clark@oclc.org
2. Schemas	mailto:brian_clark@oclc.org
3. Templates	mailto:brian_clark@oclc.org

Displaying records 1-3 out of 3

<< First < Prev 1 Next >

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Profile Summary

Collections collection record version 1.0

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Collection Name: Collections

Local Identifier Type: dataDerived

Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** false
- **Default Schema URI:**
<http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/collection>
- **Description:** Collections Collection
- **Abstract Elements:**
 - /index-root/col:collection/collectionName
 - /index-root/col:collection/adminEmail
- **XSDIdentifierXPath:** /index-root/col:collection/collectionName
- **XSDRootElement:** col:collection
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string

Create a new Collections Collection Record

Collection Info:

Collection Name	Agents
Local Identifier Type	dataDerived
Admin Email	mailto:brian_clark@oclc.org

Profile Information:

Versioned:	true
Default Schema URI:	http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/agent
Description	Agents Collection
Abstract Info:	<ul style="list-style-type: none">• xPath: <input type="text"/>• xPath: <input type="text"/>• Add New
XSD Identifier XPath:	n:agent/name
XSD Root Element:	n:agent
Indexes:	<input type="button" value="Create"/> <input type="button" value="Cancel"/>

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Agents collection record version 1.0

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Collection Name: Agents
Local Identifier Type: userAssigned
Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** false
- **Default Schema URI:**
http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/agent
- **Description:** Agents Collection
- **Abstract Elements:**
- **XSDIdentifierXPath:** n:agent/name
- **XSDRootElement:** n:agent
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string
 - **Name:** local.emailAddress
Type: string

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Profile Summary

Collections collection record version 1.0

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Collection Name: Collections

Local Identifier Type: dataDerived

Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** false
- **Default Schema URI:**
<http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/collection>
- **Description:** Collections Collection
- **Abstract Elements:**
 - /index-root/col:collection/collectionName
 - /index-root/col:collection/adminEmail
- **XSDIdentifierXPath:** /index-root/col:collection/collectionName
- **XSDRootElement:** col:collection
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string

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Search the Collection:

Search results for 'cql.any = ***'

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<< First < Prev 1 Next >

collectionName	adminEmail
1. Collections	mailto:brian_clark@oclc.org
2. Schemas	mailto:brian_clark@oclc.org
3. Agents	mailto:brian_clark@oclc.org
4. Templates	mailto:brian_clark@oclc.org

Displaying records 1-4 out of 4

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Profile Summary

Agents collection record version 1.0

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Collection Name: Agents
Local Identifier Type: userAssigned
Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** false
- **Default Schema URI:**
http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/agent
- **Description:** Agents Collection
- **Abstract Elements:**
- **XSDIdentifierXPath:** n:agent/name
- **XSDRootElement:** n:agent
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string
 - **Name:** local.emailAddress
Type: string

- **Indexes:**

- **Name:** dc.identifier
Type: string
- **Name:** dc.title
Type: string
- **Name:** hist.currentFlag
Type: string
- **Name:** hist.versionID
Type: string
- **Name:** local.emailAddress
Type: string
- **Name:** local.adminStatus
Type: string
- **Name:** local.modificationDate
Type: string
- **Name:** local.postalAddress
Type: string
- **Name:** local.thingsDeveloped_identifier_type
Type: string
- **Name:** local.fax
Type: string
- **Name:** local.name
Type: string
- **Name:** local.contentType
Type: string
- **Name:** local.versionID
Type: string
- **Name:** local.note
Type: string
- **Name:** local.source
Type: string
- **Name:** local.thingsSupported_identifier_type
Type: string
- **Name:** local.agentType
Type: string
- **Name:** local.provenance
Type: string

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Profile Summary

Agents collection record version 1.0

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Collection Name: Agents
Local Identifier Type: userAssigned
Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** false
- **Default Schema URI:**
http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/agent
- **Description:** Agents Collection
- **Abstract Elements:**
- **XSDIdentifierXPath:** n:agent/name
- **XSDRootElement:** n:agent
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string
 - **Name:** local.emailAddress
Type: string



Search

[Search](#)

Index	Relation	Term	Boolean
cql.any	=		and
dc.identifier	exact		and
dc.title	any		and
hist.currentFlag	all		and
hist.versionID	<		and
hist.versionID	>		and
hist.versionID	<=		and
hist.versionID	>=		and
local.adminStatus	not		and
local.agentType	=		and
local.briefLabel	=		and
local.contentType	=		and
local.country	=		and
local.creationDate	=		and
local.currentFlag	=		and
local.emailAddress	=		and
local.fax	=		and
local.modificationDate	=		and

Browse

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Index	Relation	Term
cql.any	=	
Response Position:		10
Maximum Terms:		20

[Browse](#)

http://devapp1.dev.oclc.org:3110/webservices/registry/search/Agents?

local.telephone	=		and
local.thingsDeveloped_identifier_type	=		and
local.thingsDeveloped_identifier_value	=		and
local.thingsSupported_identifier_type	=		and
local.thingsSupported_identifier_value	=		and
local.title	=		and
local.type	=		and
local.value	=		and
local.verificationDate	=		and
local.versionID	=		and
local.website	=		and
srw.serverChoice	=		and

Record Schema:

Number of Records:	10
Record Position:	1
Result Set TTL:	0
Record Packing:	XML
Record XPath:	
Sort Keys:	
Restrictor Summaries:	

Number of Records: 10

Record Position: 1

Result Set TTL: 0

Record Packing: XML

Record XPath:

Sort Keys:

Restrictor Summaries:

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Search results for 'cql.any = %'

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<< First < Prev 1 Next >

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Profile Summary

Agents

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Collection Name: Agents
Local Identifier Type: databaseAssigned
Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** true
- **Default Schema URI:**
http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/agent
- **Description:** Agents Collection
- **Abstract Elements:**
- **XSDIdentifierXPath:** n:agent/name
- **XSDRootElement:** n:agent
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string
 - **Name:** local.emailAddress
Type: string

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Create a new Agents Collection Record

GDFR Base:

Admin Status	Active
Source:	BrianJClark
Creation Date	2007-04-23T12:30:00-04:10
Modification Date	2007-04-23T12:30:00-04:10
Verification Date	2007-04-23T12:30:00-04:10
Provenance	None
Note	Note

Agent Info:

Agent Type	CentralGovernmentOrganization
Name:	Brian J. Clark
Title:	Software Developer
Postal Address:	6565 Frantz. Rd. Dublin Ohio
Country Code:	US
Telephone 1:	6147646213
Telephone 2:	6147646000
Fax:	6137646001
Email Address:	brian_clark@oclc.org
Website:	http://www.oclc.org

Things Developed:

http://devapp1.dev.oclc.org:3110/webservices/registry/edit/Agents/New

Go

GDFR Identifier

• Type: BCP

• Value: BCP1

GDFR Identifier

• Type: AFNOR

• Value: AFNOR

Things Supported:

GDFR Identifier

• Type: Handle

• Value: Handle

GDFR Identifier

• Type: TOM

• Value: TOM

Things Authored:

GDFR Identifier

• Type: URI

• Value: URI

GDFR Identifier

• Type: OCLC

• Value: OCL

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Profile Summary

Brian J. Clark

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GDFR Base:

- **Admin Status:** Active
- **Source:** BrianJClark
- **Creation Date:** 2007-04-23T12:30:00-04:10
- **Modification Date:** 2007-04-23T12:30:00-04:10
- **Verification Date:** 2007-04-23T12:30:00-04:10
- **Provenance:** None
- **Note:** Note

Agent Type: CentralGovernmentOrganization

Name: Brian J. Clark

Title: Software Developer

Postal Address: 6565 Frantz. Rd. Dublin Ohio

Name: Brian J. Clark

Country: US

Telephone: 6147646213

Telephone: 6147646000

Fax: 6137646001

Email Address: brian_clark@oclc.org

Website: http://www.oclc.org

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Create a new Agents Collection Record

GDFR Base:

Admin Status	Active
Source:	BrianJClark
Creation Date	2007-04-23T12:30:00-04:10
Modification Date	2007-04-23T12:30:00-04:10
Verification Date	2007-04-23T12:30:00-04:10
Provenance	None
Note	Note

Agent Info:

Agent Type	CentralGovernmentOrganization
Name:	Brian J. Clark
Title:	Software Developer
Postal Address:	6565 Frantz. Rd. Dublin Ohio
Country Code:	US
Telephone 1:	6147646213
Telephone 2:	6147646000
Fax:	6137646001
Email Address:	brian_clark@oclc.org
Website:	http://www.oclc.org

Things Developed:

http://devapp1.dev.oclc.org:3110/webservices/registry/edit/Agents/New

Go

GDFR Identifier

• Type: BCP

• Value: BCP1

GDFR Identifier

• Type: AFNOR

• Value: AFNOR

Things Supported:

GDFR Identifier

• Type: Handle

• Value: Handle

GDFR Identifier

• Type: TOM

• Value: TOM

Things Authored:

GDFR Identifier

• Type: URI

• Value: URI

GDFR Identifier

• Type: OCLC

• Value: OCL

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Profile Summary

Brian J. Clark

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GDFR Base:

- **Admin Status:** Active
- **Source:** BrianJClark
- **Creation Date:** 2007-04-23T12:30:00-04:10
- **Modification Date:** 2007-04-23T12:30:00-04:10
- **Verification Date:** 2007-04-23T12:30:00-04:10
- **Provenance:** None
- **Note:** Note

Agent Type: CentralGovernmentOrganization

Name: Brian J. Clark

Title: Software Developer

Postal Address: 6565 Frantz. Rd. Dublin Ohio

Name: Brian J. Clark

Country: US

Telephone: 6147646213

Telephone: 6147646000

Fax: 6137646001

Email Address: brian_clark@oclc.org

Website: http://www.oclc.org

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Search results for 'cql.any = ***'

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adminData:resourceID

1. [info:rfa/localhost/Agents/0000000001](#)
2. [info:rfa/localhost/Agents/0000000002](#)

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Search the Collection:

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[Create a new record](#)

Profile Summary

Brian J. Clark

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GDFR Base:

- **Admin Status:** Active
- **Source:** BrianJClark
- **Creation Date:** 2007-04-23T12:30:00-04:10
- **Modification Date:** 2007-04-23T12:30:00-04:10
- **Verification Date:** 2007-04-23T12:30:00-04:10
- **Provenance:** None
- **Note:** Note

Agent Type: CentralGovernmentOrganization

Name: Brian J. Clark

Title: Software Developer

Postal Address: 6565 Frantz. Rd. Dublin Ohio

Name: Brian J. Clark

Country: US

Telephone: 6147646213

Telephone: 6147646000

Fax: 6137646001

Email Address: brian_clark@oclc.org

Website: http://www.oclc.org

Things Developed:

- **Identifier:**

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
- <n:agent xsi:schemaLocation="info:gdfr/xmlSchemas/format http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/agent info:gdfr/xmlSchemas/gdfrbase http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/gdfrbase">
  - <gdfrbase:gdfrbase>
    <adminStatus>Active</adminStatus>
    <source>BrianJClark</source>
    <creationDate>2007-04-23T12:30:00-04:10</creationDate>
    <modificationDate>2007-04-23T12:30:00-04:10</modificationDate>
    <verificationDate>2007-04-23T12:30:00-04:10</verificationDate>
    <provenance>None</provenance>
    <note>Note</note>
  </gdfrbase:gdfrbase>
  <agentType>CentralGovernmentOrganization</agentType>
  <name>Brian J. Clark</name>
  <title>Software Developer</title>
  <postalAddress>6565 Frantz. Rd. Dublin Ohio</postalAddress>
  <country>US</country>
  <telephone>6147646213</telephone>
  <telephone>6147646000</telephone>
  <fax>6137646001</fax>
  <emailAddress>brian_clark@oclc.org</emailAddress>
  <website>http://www.oclc.org</website>
  - <thingsDeveloped>
    - <gdfrbase:identifier>
      <type>BCP</type>
      <value>BCP1</value>
    </gdfrbase:identifier>
    - <gdfrbase:identifier>
      <type>AFNOR</type>
      <value>AFNOR</value>
    </gdfrbase:identifier>
  </thingsDeveloped>
  - <thingsSupported>
    - <gdfrbase:identifier>
```

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Search the Collection:

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Profile Summary

Collections collection record version 1.0

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XML](#)

[Edit this record](#)

Collection Name: Collections

Local Identifier Type: dataDerived

Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** false
- **Default Schema URI:**
<http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/collection>
- **Description:** Collections Collection
- **Abstract Elements:**
 - /index-root/col:collection/collectionName
 - /index-root/col:collection/adminEmail
- **XSDIdentifierXPath:** /index-root/col:collection/collectionName
- **XSDRootElement:** col:collection
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string

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Search the Collection:

Search results for 'cql.any = ***'

Displaying Records 1-4 out of 4

<< First < Prev 1 Next >

collectionName	adminEmail
1. Collections	mailto:brian_clark@oclc.org
2. Schemas	mailto:brian_clark@oclc.org
3. Templates	mailto:brian_clark@oclc.org
4. Agents	mailto:brian_clark@oclc.org

Displaying records 1-4 out of 4

<< First < Prev 1 Next >

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Create a new Collections Collection Record

Collection Info:

Collection Name	Collections
Local Identifier Type	dataDerived
Admin Email	mailto:brian_clark@oclc.org

Profile Information:

Versioned:	true
Default Schema URI:	http://devapp1.dev.oclc.org:3110/webservices/registry/content/Scher
Description	Collections Collection
Abstract Info:	<ul style="list-style-type: none">• xPath: <code>/index-root/col:collection/collectionName</code>• xPath: <code>/index-root/col:collection/addedInfo/pro:profile/versioned</code>• Add New
XSD Identifier XPath:	<code>/index-root/col:collection/collectionName</code>
XSD Root Element:	<code>col:collection</code>
	<ul style="list-style-type: none">• Name: dc.identifier Type: string• Name: dc.title

[Create a new record](#)

Profile Summary

Collections

[Download this record as
XML](#)

[Edit this record](#)

Collection Name: Collections

Local Identifier Type: dataDerived

Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** true
- **Default Schema URI:**
<http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/collection>
- **Description:** Collections Collection
- **Abstract Elements:**
 - /index-root/col:collection/collectionName
 - /index-root/col:collection/addedInfo/pro:profile/versioned
- **XSDIdentifierXPath:** /index-root/col:collection/collectionName
- **XSDRootElement:** col:collection
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string
 - **Name:** local.resourceURI
Type: string
 - **Name:** local.xpath
Type: string
 - **Name:** local.contentType
Type: string

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Search the Collection:

[Advanced Search](#)

Search results for 'cql.any = ***'

Displaying Records 1-4 out of 4

[Edit the Abstract](#)

<< First < Prev 1 Next >

collectionName	versioned
1. Schemas	false
2. Templates	false
3. Agents	true
4. Collections	true

Displaying records 1-4 out of 4

<< First < Prev 1 Next >

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Profile Summary

Collections

[Download this record as XML](#)

[Log in to edit this record](#)

Collection Name: Collections

Local Identifier Type: dataDerived

Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** true
- **Default Schema URI:**
http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/collection
- **Description:** Collections Collection
- **Abstract Elements:**
 - /index-root/col:collection/collectionName
 - /index-root/col:collection/addedInfo/pro:profile/versioned
- **XSDIdentifierXPath:** /index-root/col:collection/collectionName
- **XSDRootElement:** col:collection
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string

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Profile Summary

Schemas collection record version 1.0

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XML](#)

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Collection Name: Schemas
Local Identifier Type: userAssigned
Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** false
- **Default Schema URI:** <http://www.w3.org/2001/XMLSchema-instance>
- **Description:** schemas Collection
- **Abstract Elements:**
- **XSDIdentifierXPath:**
- **XSDRootElement:** xs:schema
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string
 - **Name:** cql.any
Type: string

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Profile Summary

Agents

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Collection Name: Agents

Local Identifier Type: databaseAssigned

Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** true
- **Default Schema URI:**
<http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/agent>
- **Description:** Agents Collection
- **Abstract Elements:**
- **XSDIdentifierXPath:** n:agent/name
- **XSDRootElement:** n:agent
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string
 - **Name:** local.emailAddress
Type: string

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
- <col:collection xsi:schemaLocation="info:rfa/rfaRegistry/xmlSchemas/collection http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/collection">
  <resourceURI>info:rfa/localhost/Collections/Agents</resourceURI>
  <collectionName>Agents</collectionName>
  <localIdentifierType>databaseAssigned</localIdentifierType>
  <adminEmail>mailto:brian_clark@oclc.org</adminEmail>
- <addedInfo>
  - <pro:profile xsi:schemaLocation="info:rfa/rfaRegistry/xmlSchemas/profile http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/profile">
    <versioned>true</versioned>
    - <defaultSchemaURI>
      http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/agent
    </defaultSchemaURI>
    <identifier/>
    <description>Agents Collection</description>
  - <abstractDescription>
    <abstractElement/>
    <abstractElement/>
  </abstractDescription>
  - <indexes>
    - <index>
      <name>dc.identifier</name>
      - <>xpath>
        /index-root/adminData:adminData/adminData:resourceID
      </xpath>
      <type>string</type>
    </index>
    - <index>
      <name>dc.title</name>
      <>xpath>/index-root/col:collection/collectionName</xpath>
      <type>string</type>
    </index>
    - <index>
      <name>hist.currentFlag</name>
```

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
- <adminData:adminData>
  <adminData:resourceID>info:rfa/localhost/Collections/Agents</adminData:resourceID>
  <adminData:briefLabel>Agents</adminData:briefLabel>
  - <adminData:version>
    <adminData:currentFlag>1</adminData:currentFlag>
    <adminData:versionID>2007-04-23T22:09:13Z</adminData:versionID>
  </adminData:version>
  <adminData:contentType>text/xml; charset=utf-8</adminData:contentType>
- <adminData:about>
  - <abstract>
    <collectionName>Agents</collectionName>
    <versioned>true</versioned>
  </abstract>
</adminData:about>
</adminData:adminData>
```

Search

[Search](#)

Index	Relation	Term	Boolean
cql.any	=		and
cql.any	=		and
cql.any	=		and
dc.identifier	=		and
dc.title	=		and
hist.currentFlag	=		and
hist.versionID	=		and
local.adminEmail	=		and
local.briefLabel	=		and
local.collectionName	=		and
local.contentType	=		and
local.currentFlag	=		and
local.defaultSchemaURI	=		and
local.description	=		and
local.identifier	=		and
local.localIdentifierType	=		and

Browse

[Browse](#)

Index	Relation	Term
cql.any	=	

Response Position: 10

Maximum Terms: 20

[Browse](#)

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Search the Collection:

Search

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Profile Summary

Collections

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XML](#)

[Log in to edit this record](#)

Collection Name: Collections

Local Identifier Type: dataDerived

Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** true
- **Default Schema URI:**
<http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/collection>
- **Description:** Collections Collection
- **Abstract Elements:**
 - /index-root/col:collection/collectionName
 - /index-root/col:collection/addedInfo/pro:profile/versioned
- **XSDIdentifierXPath:** /index-root/col:collection/collectionName
- **XSDRootElement:** col:collection
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string

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Profile Summary

Agents

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Collection Name: Agents
Local Identifier Type: databaseAssigned
Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** true
- **Default Schema URI:**
http://devapp1.dev.oclc.org:3110/webservices/registry/content/Schemas/agent
- **Description:** Agents Collection
- **Abstract Elements:**
- **XSDIdentifierXPath:** n:agent/name
- **XSDRootElement:** n:agent
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string
 - **Name:** local.emailAddress
Type: string

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Search the Collection:

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Profile Summary

Templates collection record version 1.0

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Collection Name: Templates
Local Identifier Type: userAssigned
Admin Email: mailto:brian_clark@oclc.org

Profile Information:

- **Versioned:** false
- **Default Schema URI:**
- **Description:** Templates Collection
- **Abstract Elements:**
- **XSDIdentifierXPath:**
- **XSDRootElement:**
- **Indexes:**
 - **Name:** dc.identifier
Type: string
 - **Name:** dc.title
Type: string
 - **Name:** hist.currentFlag
Type: string
 - **Name:** hist.versionID
Type: string
 - **Name:** local.briefLabel
Type: string

Registry Services at OCLC



Registry Services at OCLC

- The goal is to connect Web surfers at their point of need with the full capacity of member libraries
- Capture and describe the capacity of libraries and library services in registries
- WorldCat will grow into a constellation of registries about libraries, their services, their collections, and the expertise of their communities

Definition of a Registry

- Collection of registry objects compiled to support the business of a given community (ISO 2146)
- Attributes of a useful registry:
 - Comprehensive
 - Accurate
 - Open
 - Standards based
 - Unique & persistent record identification
- Includes services on top of the data – not just the data

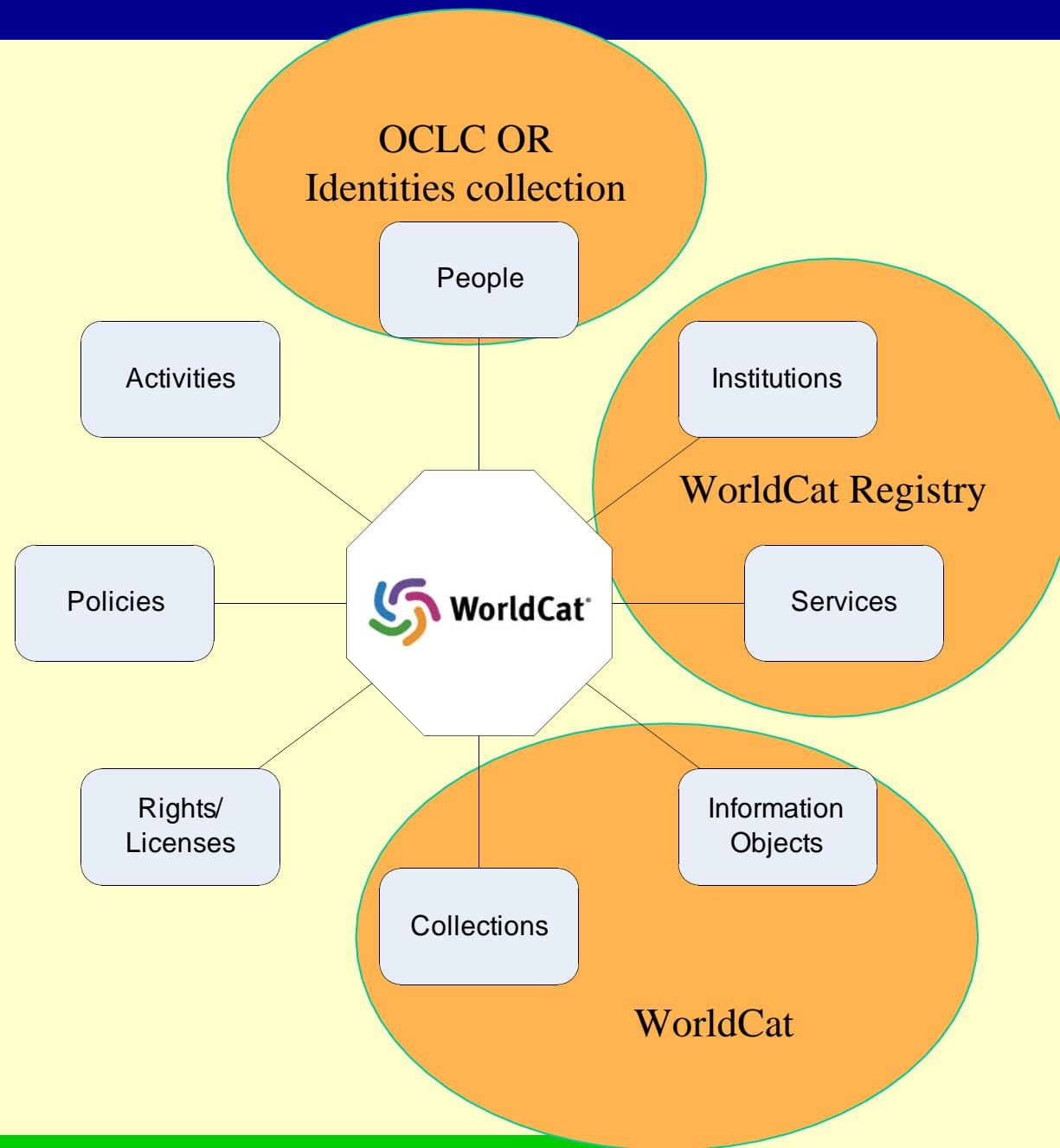
Library Capacity

- All libraries have capacity
 - Collections (physical & digital), services, people, expertise
- Registries describe library capacity
- Library capacity can be released through registries

Registry Topology



Registry Topology (cont.)



Questions?



For more information

■ Contact information:

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Brian_Clark@oclc.org

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