



Proposal for a goal-oriented shared catalog model

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Summary

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6. Goals
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8. Conclusions



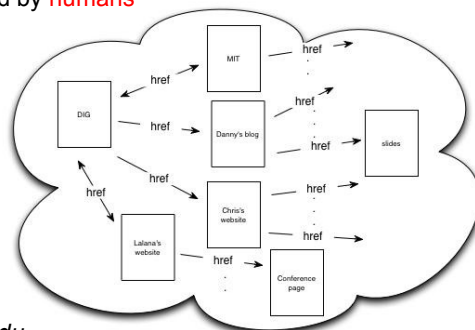
1. Introduction



1. Introduction

Web of documents...

- Nodes are **documents**. Focus on **description**
- Relationships explicated by **links**
- Relationships inferred by **humans**

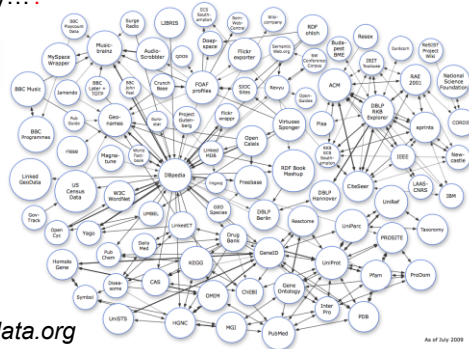


<http://www.dig.csail.mit.edu>

1. Introduction

Web of data...

- Nodes are **data**. Focus on **relation**.
- Relationships explicated by **links**
- Relationships inferred by...?



<http://linkeddata.org>

As of July 2009

1. Introduction

Linked data

- **Action**
 - Expose, share, connect...
- **Matter**
 - Data, information, knowledge.
- **Medium**
 - Web
- **Vocabulary**
 - RDF, URI.



2. Linked data & Libraries ———



2. Linked data & Libraries ———

- Document description formats are **extensive** and **diverse**
- Need for integration with other standards to allow **search queries** and **inferences**



2. Linked data & Libraries

Working groups:

- W3C Library Linked Data Incubator Group
- BNF Pivot Project
- LCSH/SKOS Project



2. Linked data & Libraries

Examples:

- Worldcat
- TALIS
- LIBRIS

A collage of three screenshots illustrating library catalog interfaces. The top screenshot shows the LIBRIS website with a search bar and navigation links. The middle screenshot shows the WorldCat interface for the book 'au Umberto Eco'. The bottom screenshot shows the talis Platform interface, highlighting its data connectivity and analytics features.

2. Linked data & Libraries

Other products and services:

- DBpedia
- Fiction Finder
- LibraryThing

The screenshot shows two overlapping web pages. The top page is DBpedia, displaying search results for 'Balzac and the Little Chinese Seamstress'. It includes a search bar, filters for 'Your Filters' (Reset Filters, Book count: 50 and up, Location: Hong Kong), and a table of properties. The bottom page is LibraryThing, showing the same book's details, including a cover image, author information, and a list of related books.



3. Next Generation Catalogs



3. Next Generation Catalogs —

Advanced features:

- Metadata **transformation**, **extraction** or **transference**
- **Browsing** and **discovering** information about collections
- **User experience** management



3. Next Generation Catalogs —

Tools and applications:

- Encore
- Primo
- Aquabrowser
- Endeca
- Vufind
- SOPAC
- ...



3. Next Generation Catalogs —

Shared catalogs

Represent not only a **global access** to larger and richer collections, but also a **strategy for innovation** and cost reduction



3. Next Generation Catalogs —

Shared catalogs

Technical concerns

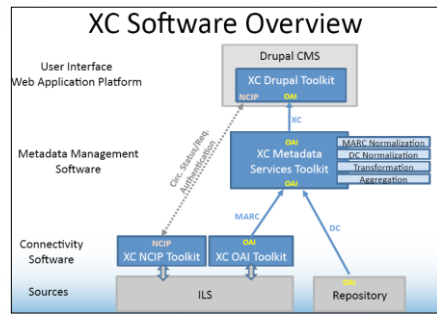
- To simplify catalog records
- To handle multiple metadata schemes
- To obtain and/or reuse data
- To identify and avoid local customizations
- To improve interoperability with ILS and inventory tools



3. Next Generation Catalogs

Shared catalogs

Case study: eXtensible Catalog (XC)



<http://www.extensiblecatalog.org/>

3. Next Generation Catalogs

Shared catalogs

Case study: eXtensible Catalog (XC)

- Interoperability and interaction with ILS
- Definition and application of linked data
- User-centered design



4. Challenges



4. Challenges

XC still rely basically on catalog
concept

Next generation catalogs could
be improved by using Inferred
Functional Models



4. Challenges

- Automatic classification
- Ontologies and taxonomies
- Authority control
- User experience management
- External services linking



5. Goals



5. Goals

To propose a **framework** to integrate some applications in a **shared cataloging** system, so that...



5. Goals

The user could experience a **goal-oriented navigation** instead of "card-navigation"



5. Goals

- In order to do that:
 - **Structured information** should be transformed into **inference rules**
 - **External information** should be added (controlled and uncontrolled)
 - The user should receive **suggestions** based on the inferences drawn from internal and external resources



6. Goal-Oriented Catalog



6. Goal-Oriented Catalog

- A catalog focused in user actions requires
 - That **users** take the reins, deciding what **information** they want to search on
 - Data detectors
 - That **users** receive **suggestions** search-related
 - External sources



6. Goal-Oriented Catalog

- A catalog focused in user actions requires
 - That **system** can learn from user **actions**
 - Learning by example
 - That **system** can learn how to make **inferences** from user's consultations
 - Knowledge databases

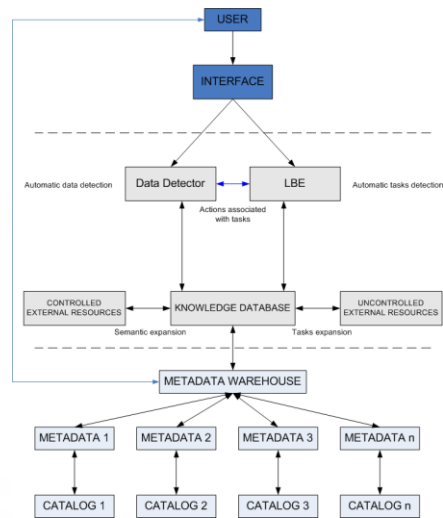


6. Goal-Oriented Catalog

-Each catalog expose their metadata like data providers

-All metadata content is stored and structured in OWL in the metadata warehouse

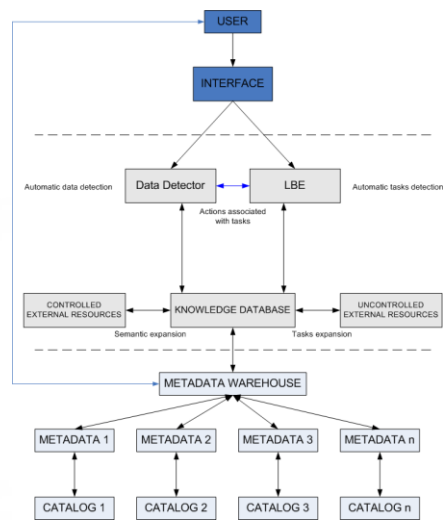
-Metadata and external resources feed the knowledge database



6. Goal-Oriented Catalog

-Users select content directly with the data detector, which query the knowledge database.

-Users receive suggestions through the LBE, which store user actions.



7. Caveats



7. Caveats

- Empirical research is needed
- Level of user interactions
- Accuracy of relations between applications
- Accuracy of relations between data



8. Conclusions



8. Conclusions

- A theoretical model for the integration of LBE, data detectors and knowledge databases is proposed
- These applications already exists, this paper proposes the combination and use within bibliographical information environments



Thank you for your attention!

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