Establishing Semantic Identity

For Accurate Representation on the Web

Kenning Arlitsch, Dean of the Library
Patrick OBrien, Semantic Web Research Director
The Point

Libraries are poorly defined and represented on the Semantic Web...
Google’s Knowledge Graph

• “A knowledge base ... to enhance search results with semantic-search information gathered from a wide variety of sources”

• “The goal is that users would be able to use this information to resolve their query without having to navigate to other sites and assemble the information themselves”

Knowledge Graph Products

• Answer Box
  – Facts about concepts that haven’t necessarily been established as entities

• Carousel
  – Group of instances that comprise a concept

• Knowledge Card
  – Displays information about entities
A biofilm is any group of microorganisms in which cells stick to each other on a surface. These adherent cells are frequently embedded within a self-produced matrix of extracellular polymeric substance (EPS).

Biofilm - Wikipedia, the free encyclopedia

A biofilm is any group of microorganisms in which cells stick to each other on a surface. These adherent cells are frequently embedded within a self-produced matrix of extracellular polymeric substance (EPS).
Extracellular polymeric - Quorum sensing - Phototrophic biofilms

The role of bacterial biofilms in chronic infections.
NBA.com Team Index
www.nba.com/teams/
Quick Links. News · Stats · Buy Tickets · Dallas Mavericks. Quick Links. News · Stats · Buy Tickets · Brooklyn Nets. Quick Links. News · Stats · Buy Tickets...

NBA Basketball Teams - National Basketball Association...
Boston Celtics Roster - Miami Heat 2014 Team Roster - Los Angeles Clippers Roster

List of current NBA team rosters - Wikipedia, the free...
... 2.2.4 Oklahoma City Thunder; 2.2.5 Utah Jazz; 2.3 Pacific Division; 2.3.1 Golden State Warriors; 2.3.2 Los Angeles Clippers; 2.3.3 Los Angeles Lakers; 2.3.4...
Eastern Conference - Western Conference - See also - References

News for NBA teams

National Basketball Association
2,418,637 followers on Google+
Follow

The National Basketball Association is the pre-eminent men's professional basketball league in North America, and is widely considered to be the premier men's professional basketball league in the world. Wikipedia

Founded: June 6, 1946, New York City, NY
Headquarters: New York City, NY
Customer service: 1 (866) 746-7622 (Consumer)

Recent posts

Mountains & Minds
Survey of ARL Libraries

• 125 ARL Libraries
• Searched by name listed in ARL directory
• Knowledge Card? Yes/No
• Robustness scale of 1-5
Cornell University Library
https://www.library.cornell.edu/
President Ólafur Ragnar Grímsson visited Cornell in late November. Among other stops on campus, he came to the library to tour Cornell’s renowned Fiske...

Digital Library
The Alfredo Montalvo Bolivian Digital Pamphlets Collection is ...

My Account
... Services · Ask a Librarian · Help · My Account · Home; My ...

About Us
About Us. Welcome! In a time of rapid change, Cornell University ...

More results from cornell.edu »

Rare and Manuscript Collections
Collections · Digital Collections · Carl A. Kroch Library - ...

Libraries and Hours
Libraries and Hours. View map of Cornell libraries. Show only ...

University Librarian
In a time of rapid change, Cornell University Library continues to ...

Map for Cornell University Library

Cornell University Library
www.library.cornell.edu
4 Google reviews

Cornell University, 201
Cornell Library
Ithaca, NY
(607) 255-4144
Survey of ARL Libraries

No Knowledge Card at all
43

Have Knowledge Card
82
-10 incorrect
-29 (robustness of 1)
Total = 43
Where does Google get its information?
Trusted Sources for Search Engines

• No Wikipedia presence?
  – You don’t exist as an important “entity” or “thing”
  – You exist as a string of (confusing) text

• Other influences on Google’s Knowledge Graph
  – FreeBase
  – Google Places/Google My Business
  – Google+
The page "Montana state university library" does not exist. You can ask for it to be created, but consider checking the search results below to see whether the topic is already covered.
Montana State University Library

Montana State University Library (MSU Library) is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. In 1978, the library was named the Roland R. Renne Library to honor the sixth president of the university. The library supports the research and information needs of Montana's students, faculty, and the Montana Extension Service.

Contents

1 History
2 Collections
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   2.2 ScholarWorks
   2.3 Special Collections and University Archives
3 Budget
4 Special events
5 Awards
6 Memberships
7 See also
8 References

History

In January 1894, about seven months after Montana College of Agriculture and Mechanic Arts was founded, the college began acquiring and housing a formal library collection for its students and faculty research use. For the first two years of the library's existence, students or instructors served part-time to provide library services. In 1896, Mabel Ruth Owens became the first full-time professional librarian to oversee the library's operations and collection development. In 1927, the library was moved to the second floor of Montana Hall.[2]

In 1949, the library, its collection and research services were moved to a newly constructed 8,894 square feet (826.3 m²) library facility.[3] After the transfer of nearly 100,000 volumes from various locations around campus the library officially opened its doors on January 9, 1950.[4]
DBPedia entry - 2012

About: http://dbpedia.org/resource/Montana_State_University Library
An Entity of Type: Thing, from Named Graph: http://dbpedia.org, within Data Space: dbpedia.org

No further information is available. (The requested entity is unknown)
Montana State University Library (MSU Library) is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. In 1978, the library was named the Roland R. Renne Library to honor the sixth president of the university. The library supports the research and information needs of Montana's students, faculty, and the Montana Extension Service.

- **Property**: dbpedia-owl:abstract
  - Value: Montana State University Library (MSU Library) is the academic library of Montana State University, Montana's land-grant university, in Bozeman, Montana, United States. It is the flagship library for all of Montana State University System's campuses. In 1978, the library was named the Roland R. Renne Library to honor the sixth president of the university. The library supports the research and information needs of Montana's students, faculty, and the Montana Extension Service.

- **Property**: dbpedia-owl:thumbnail
  - Value: http://www.lib.montana.edu/
  - Value: http://www.lib.montana.edu/digital/
  - Value: http://arc.lib.montana.edu/bozeman-0771/
  - Value: http://arc.lib.montana.edu/bozeman-extension

- **Property**: dbpedia-owl:wikiPageID
  - Value: 33974954 (xsd:integer)

- **Property**: dbpedia-owl:wikiPageRevisionID
  - Value: 60480365 (xsd:integer)

- **Property**: dbpprop:established
  - Value: January 1894

- **Property**: dbpprop:isleOf
  - Value: Bozeman, Montana, US

- **Property**: dbpprop:phoneNum
  - Value: 522-9231 (xsd:integer)

- **Property**: dcterms:subject
  - Value: category:Academic_Libraries
  - Value: category:Montana_State_University__Bozeman
  - Value: category:University_and_college_academic_libraries_in_the_United_States

- **Property**: gsp:point
  - Value: 45.663702833333335-111.04840322222222

- **Property**: rdfs:comment
  - Value: geo:SpatialThing
  - Value: owl:Thing
  - Value: http://schema.org/EducationalOrganization
  - Value: http://schema.org/Library
  - Value: http://schema.org/Location
  - Value: dcterms:subject
  - Value: dcterms:subject
Freebase entry – created by bot 3/10/2012
Montana State University Library

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Google+ entry 2014
Summary

• Define library organization in Wikipedia
  – Beware of *pedia culture and process

• Engage with other trusted data sources
  – FreeBase
  – Google Places/Google My Business
  – Google+

• Mark-up metadata with Schema.org
The Point

Libraries are poorly defined and represented on the Semantic Web...

...but we know how to fix that problem...

...mostly
MSU Library Semantic Web Team

- Kenning Arlitsch, Dean
- Patrick OBrien, Semantic Web Director
- Jason Clark, Head of Library Informatics and Computing
- Scott Young, Digital Initiatives Librarian
- Jeff Mixter, OCLC Research