FAST: Faceted Application of Subject Terminology

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at OLA Super Conference,
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Agenda

- Introduction to Subject Metadata on the Web
  - LCSH
  - FAST
- History of FAST
- Structure of FAST
- Examples of FAST Subject Authorities
- Demonstration of Test Database
- Examples of Implementations of FAST
- Summary
- Questions
Introduction to Subject Metadata on the Web

- Large increase in the number of web resources

- Need a system of searching these web resources using a standardized subject vocabulary

- The subject vocabulary needs to be user-friendly and compatible with many different metadata standards
Introduction to Subject Metadata on the Web

- ALCTS/SAC/Subcommittee (1999) identified the following as attributes of a subject metadata scheme for the web
  - Be simple and easy to apply and to comprehend,
  - Be intuitive so that sophisticated training in subject indexing and classification, while highly desirable, is not required in order to implement,
  - Be logical so that it requires the least effort to understand and implement,
  - Be scalable for implementation from the simplest to the most sophisticated.
Introduction to Subject Metadata on the Web

The ALCTS/SAC/Subcommittee on Metadata and Subject Analysis identified three basic approaches to selecting an indexing/subject heading schema for Internet resources:

- Using an existing schema(s),
- Adapting or modifying existing schema(s),
- Developing new schema(s).
Introduction to Subject Metadata on the Web

- The Library of Subject Headings (LCSH) is the most commonly used subject vocabulary.
- LCSH is a model for many other controlled vocabularies.
- LCSH complex syntax and rules for construction limit its effectiveness for automated authority control.
Introduction to Library of Congress Subject Headings (LCSH)

LCSH is the most widely used indexing vocabulary and offers many significant advantages:

- Its rich vocabulary covers all subject areas,
- It has the strong institutional support of the Library of Congress,
- It imposes synonym and homograph control,
- It has been extensively used by libraries,
- It is contained in millions of bibliographic records, and
- It has a long and well-documented history.
Introduction to Library of Congress Subject Headings (LCSH): Application of LCSH to the Web

- LCSH is not compatible in syntax with most other controlled vocabularies;
- LCSH is not amenable to search engines outside of the OPAC environment
- Few LCSH headings are established
- Complex subject heading strings in bibliographic or metadata records are costly to maintain
- LCSH does not lend itself to automatic indexing or authority control
- The use of LCSH requires highly trained personnel
Introduction to FAST

- What is Faceted Application of Subject Terminology (FAST)?
  - A rich controlled vocabulary based on the terminology of *Library of Congress Subject Headings* (LCSH)
  - A simplified application syntax
Introduction to FAST

FAST was designed to achieve the following objectives

1. Compatibility with existing metadata
2. Ease of assignment
3. Retrieval effectiveness
4. Cost of maintenance
5. Semantic interoperability
History of FAST

- FAST was a joint research and development project by OCLC and the Library of Congress.

- FAST was developed from OCLC research that began in 1998 to create a subject access system that optimizes the use of technology for Dublin Core metadata records.
History of FAST

- Association for Library Collections and Technical Services Subject Analysis Committee (ALCTS-SAC) Sub-committee created the report titled:

- *Subject Data in the Metadata Record Recommendations and Rationale: A Report from the ALCTS/SAC/Subcommittee on Metadata and Subject Analysis*. 1999
Structure of FAST

- Seven facets:
  1. Topical
  2. Geographic
  3. Form
  4. Chronological
  5. Personal Name
  6. Corporate Name
  7. Title
Structure of FAST: Topical Facet

- The topical facet consists of the following:
  (including events, meetings, conferences)
  - Topical main headings
  - Topical subdivisions

- Examples of topical facet consists of the following:
  - Biology—Abstracting and indexing
  - Women—Legal status, laws, etc.
  - Revolution (France : 1789-1799)
  - Donald Duck (Fictitious character)
  - Richmond Friends Conference
Structure of FAST: Geographic Facet

- In FAST, these place names will be established and used in indirect order
  - For example: **Ontario—Toronto** (established form in FAST) NOT **Toronto (Ontario)**

- Geographic headings will be established in an authority file

- Examples of the Geographic Facet
  - North America
  - Arizona—Glen Canyon Dam
  - United States—Yellowstone National Park
  - Ohio—Columbus—German Village
  - Arkansas—Illinois (Washington County : Township)
Structure of FAST:
Form Facet

- Form facet includes all form subdivisions

- Forms were identified by extracting form subdivisions from LCSH authority records

- Examples of form facet:
  - Case studies
  - Bibliography—Exhibition catalogs
  - Dictionaries
  - Biography -- Dictionaries
Structure of FAST: Chronological Facet

- FAST chronological headings follow the practice recommended by the ALCTS-SAC sub-committee

- Chronological headings reflect the actual time period of coverage for the resource

- Chronological headings are expressed as either a single numeric date or as a date range.
  - The date is expressed in LCSH as a century, such as 20th **century**, the heading is converted to the date range: **1900-1999**
  - periods related to geological eras would be expressed as dates in addition to the name of the period: Jurassic period - **Jurassic** and **From 140 to 190 million years ago**.
Structure of FAST: Chronological Facet

- Restriction on periods is that when a date range is used, the second date must be greater than the first

- Authority records for period headings are not routinely created

- Examples of chronological facet
  - 1975
  - Since 1951
  - To 1856
  - 1939 – 1945
  - From 140 to 190 million years ago
  - 146 B.C. - 323 A.D.
  - 2001 (September 11)
  - 1989 (December 1) - 1990 (January 20)
Structure of FAST:
Personal and Corporate Name

- Personal and corporate name facets are limited to their use as subjects and do not include name-title entries.

- Examples of Personal and Corporate Names
  - Abdullah, King of Jordan, 1882-1951
  - Clinton, Bill, 1946-
  - Cappella Sistina (Vatican Palace, Vatican City)
  - United Nations. Administrative Tribunal
  - Dallas Cowboys (Football team)
Structure of FAST: Uniform Title

- Uniform title facets were not included in the initial phase of the development, they were included in the later development of FAST.

- These facets appear as subject access points.

- Format: Title of work (Name of creator)

- Examples of Uniform Title:
  - Children Act 1989 (Great Britain)
  - Hamlet (Shakespeare, William)
  - Final Act (Conference on Security and Cooperation in Europe)
Example of bibliographic record

600 10 Lincoln, Abraham, $d 1809-1865.
650 0 Political leadership $z United States$v Case studies.
650 0 Genius $v Case studies.
600 10 Lincoln, Abraham, $d 1809-1865 $x Friends and associates.
650 0 Presidents $z United States $v Biography.
651 0 United States $x Politics and government$y 1861-1865.
600 17 Lincoln, Abraham, $d 1809-1865 $2fast
648 7 1861 - 1865 $2fast
650 7 Political leadership $2fast
650 7 Genius $2fast
650 7 Friendship $2fast
650 7 Presidents $2fast
650 7 Political science $2fast
651 7 United States $2fast
655 7 Case studies $2fast
655 7 Biography $2fast
Authority records

- FAST uses MARC 21 authority format
- Authority records are created for all FAST headings, except chronological headings
  - 100 Personal name
  - 110 Corporate name
  - 130 Uniform title
  - 148 Chronological term
  - 150 Topical term
  - 151 Geographic name
  - 155 Genre/Form
Example of authority record

000  cz n
001  fst01103521
003  OCoLC
005  20080715102403.0
008  041024nn anzn nbabn || ana d
016  7 fst01103521 $2 OCoLC
040  OCoLC $b eng $c OCoLC $f fast
150  Sailing $x Safety measures
688  LC (2008) Subject Usage: 11
688  WC (2008) Subject Usage: 57
750  0 Sailing $0 (DLC)sh 85116532 $w nc
## FAST database

### In 2006:
- Personal name headings: 510,095
- Corporate name headings: 283,581
- Topical headings: 412,709
- Geographic name headings: 148,960
- Form headings: 694

**Total FAST authorities**: 1,356,039

### In 2009:
- **1,600,000**
FAST database (http://fast.oclc.org)
FAST database

Search Results

(hw: sailing) not rs = "obsolete"

70 Hits Found

- Fast Authority File

44. 150 Sailboats
    Database: Fast Authority File

45. 150 Sailing
    Database: Fast Authority File

46. 150 Sailing barges
    Database: Fast Authority File

47. 150 Sailing barges--Models
    Database: Fast Authority File

48. 150 Sailing cards
    Database: Fast Authority File

49. 150 Sailing clubs
    Database: Fast Authority File

50. 150 Sailing--Computer-assisted instruction
    Database: Fast Authority File

Records: 41 - 50  Jump to: 1 11 21 31 41 51 61
FAST database

Keywords in All Headings
Keywords in Topical Headings
Keywords in Geographic Headings
Keywords in Event Headings
Keywords in Personal Name Headings
Keywords in Corporate Name Headings
Keywords in Uniform Title Headings
Keywords in Period Headings
Keywords in LC Source Headings
Full Headings
Subfield
Full SeeAlso Heading
LC Source Headings
FAST Authority Record Number (ARN)
Record Status
Level of Establishment
Geographic Area Code (GAC)
Geographic Feature
Coordinate
LCCN for LC Source Headings
Keywords in All Headings
FAST database

003  OCoLC
005  20091009130205.0
008  060620nn anznmbahn || ana d
016  7 fst01205798 $2 0CoLC
034  $d W0792459 $e W0792459 $f N0434200 $g N0434200 $2 GeoNames
040  0CoLC $b eng $c 0CoLC $f fast
043  n-cn-on
151  Ontario $z Toronto
451  Ontario $z Corporation of the City of Toronto
451  Ontario $z City of Toronto
670  GeoNames [algorithmically matched] $b ppl;43°42'00"N 079°24'59"W
688  LC (2008) Subject Usage: 1,798 (1,831)
751  0 Toronto (Ont.) $0 (DLC)n 79079328
751  7 Toronto $0 (GeoNames)6167865 $2 geonames $w nmma
Mapping from FAST to DC

<table>
<thead>
<tr>
<th>MARC 21 tag</th>
<th>FAST Facet</th>
<th>Qualified Dublin Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>650 $a</td>
<td>Topical</td>
<td>Subject</td>
</tr>
<tr>
<td>6xx $x</td>
<td>Topical</td>
<td>Subject</td>
</tr>
<tr>
<td>6xx $y</td>
<td>Topical</td>
<td>Subject</td>
</tr>
<tr>
<td>6xx $y</td>
<td>Chronological</td>
<td>Coverage.temporal</td>
</tr>
<tr>
<td>6xx $v</td>
<td>Form</td>
<td>Type</td>
</tr>
<tr>
<td>651 $a</td>
<td>Geographic</td>
<td>Coverage.spatial</td>
</tr>
<tr>
<td>6xx $z</td>
<td>Geographic</td>
<td>Coverage.spatial</td>
</tr>
<tr>
<td>600 $abcdq</td>
<td>Personal name</td>
<td>Creator/Contributor</td>
</tr>
<tr>
<td>610 $abndc</td>
<td>Corporate name</td>
<td>Creator/Contributor</td>
</tr>
</tbody>
</table>
Conclusion:

- Topical headings and topical subdivisions appear to be properly constructed.
- Most topical headings cover the "aboutness" when post-coordinated. Some become very generic.
- There are relationship problems when some pre-coordinated strings of different facets are broken up.
- Geographic headings make sense as constructed in indirect order.
- Users might not know how FAST geographic headings are constructed.
- Separation of terms from 600 could create ambiguities and relation problems.
Review by ALA ALCTS Subject Analysis Committee, Subcommittee on FAST

Example:

LCSH: 651 0  India $x History $y 18th century
       651 0  Great Britain $x Colonies $z Asia $x Administration

FAST: Topical: Colonies $x Administration
      Topical: History
      Geographic: India
      Geographic: Asia
      Geographic: Great Britain
      Chronological: 1700-1799
Pilot projects

By U of North Dakota, U of Florida, Brigham Young U.

Conclusion:

- Easy to assign
- Brief training to non-cataloguing staff would lead to good results.
- Searching on FAST database is difficult and confusing.
- Training non-cataloguing staff to assign FAST headings is not a real problem. The real problem is training them to do subject analysis and specificity.
Implementation at University of North Dakota
(http://www.und.nodak.edu/dept/library/digital/McDonald.htm)

The Stuart McDonald Cartoon Collection

Stuart McDonald's cartoons appeared in the Sunday edition of the Grand Forks Herald from 1961-1967. His cartoons also appeared in the North Dakotan from 1965-1968. The original cartoons measure 11x14 inches, and may be found in the Stuart McDonald Papers, OGL #390.

In 1963, the Grand Forks Herald published a compilation of 112 of Stuart McDonald's cartoons in a book entitled The McDonald Book: A Collection of Editorial Cartoons by the Grand Forks Herald's Award Winning
### Implementation at University of North Dakota

<table>
<thead>
<tr>
<th>Title</th>
<th>A First Hand Introduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>Uncle Sam; American Legion Auxiliary, Dakota</td>
</tr>
<tr>
<td>Subject.topical.FAST</td>
<td>Uncle Sam (Symbolic character)</td>
</tr>
<tr>
<td>Subject.topical.FAST.2</td>
<td>Richardson's ground squirrels</td>
</tr>
<tr>
<td>Subject.topical.FAST.3</td>
<td>Women - Education</td>
</tr>
<tr>
<td>Subject.topical.FAST.4</td>
<td>Political science - Study and teaching</td>
</tr>
<tr>
<td>Subject.topical.FAST.6</td>
<td>Democracy - Study and teaching</td>
</tr>
<tr>
<td>Subject.topical.FAST.5</td>
<td>Citizenship - Study and teaching</td>
</tr>
<tr>
<td>Subject.geographic.FAST</td>
<td>North Dakota</td>
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<td>Subject.chronological.FAST</td>
<td>1961-1969</td>
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<td>Subject.nameCorporate.LCSH</td>
<td>American Legion. Auxiliary</td>
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<td>Subject.nameCorporate.LCSH.2</td>
<td>University of North Dakota</td>
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<tr>
<td>Subject.nameCorporate.LCSH.3</td>
<td>Flickertail Girls State</td>
</tr>
</tbody>
</table>
Updates from ALA Midwinter
by SAC Subcommittee on FAST

- The development phase is now completed.

- The book by Lois Chan and Ed O'Neill is being published by Libraries Unlimited and is expected to be available before the annual conference.

- Efforts now focus on enrichment of FAST authority records with additional information and supporting different applications.

- The FAST team is interested in finding more opportunities for collaboration and experimentation.


References (continues)