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searchFAST

There are a variety of ways to access the FAST authority file. For heavy users, the authority file can be loaded into a local database or OPAC. OCLC maintains a Web accessible FAST database which is freely available for searching at http://fast.oclc.org/searchfast/. In addition to identifying headings for assignment, the searchFAST interface can be used to search WorldCat.org. searchFAST is intended to supplement the current functionality of WorldCat.org. It's a prototype designed to demonstrate the benefits of a fully enumerative subject heading schema such as FAST. searchFAST can also be used to select Linked Data URIs or transition into the mapFAST geographic interface.

Upon entering searchFAST, the following screen will appear:

Enter any search term and click search to begin. The initial search is a keyword search across all facets. The interface has an autosuggest feature, which displays headings as you type that you may want to select for your search. After the initial search, options to refine the search will be available.

INDEXING OVERVIEW

Three different types of indexes are provided: keyword indexes, phrase indexes, and other miscellaneous indexes. The keyword indexes store individual words extracted from the specified fields. The phrase indexes provide access to the complete field, and the other indexes provide support access to particular data elements. The full list of FAST indexes is shown below:

Keyword Indexes:	Fields indexed
Keywords in all headings	1xx & 4xx fields
Keywords in LC source heading	7xx fields (ind2 = 0)

Phrase Indexes	
Full headings	1xx & 4xx fields
Subfield	1xx & 4xx fields
Full See Also Headings	5xx fields
Full LC Source heading	7xx fields (ind2 = 0)

Other Indexes	
FAST authority record number (ARN)	001 field, number only
LCCN for LCSH source heading	7xx fields (ind2 = 0), subfield 0
Facet	Facet indicator based on the 1xx tag

The facet attribute can be used to limit the searching to a single facet. Thus, you could search for keywords in uniform title records, or subfields in topical records. This will be described in more detail below when the search process itself is discussed. Unless otherwise specified, all subfields, except the $w and $0 - $9 subfields, are indexed.

For consistency and ease of searching, the keyword and phrase indexes are normalized using FAST normalization rules.[1] Diacritics and most punctuation are stripped, and all letters are converted to lower case. The keyword indexes are further manipulated by removing common words that add little value (stop words), and by removing common suffixes from other words (stemming).

As an example, the indexes for the following record are shown below.

```
LDR    00572cz  2200181n  4500
001    fst00848727
003    OCoLC
005    20090914163117.0
008    041024nn anznnbabn          || ana     d
016  7 $afst00848727 $2OCoLC
040    $aOCoLC $beng $cOCoLC $ffast
053  0 $aZ695.72
150    $aCataloging of books for the blind
450    $aCataloging of books in raised characters
```

[1] Hickey, Thomas B., Jenny Toves, and Edward T. O'Neill. 2001. NACO normalization. *Library Resources & Technical Services* 50 (3): 166-72.

```
550     $aBlind $xBooks and reading $0(OCoLC)fst00834295
688     $aLC (2008) Subject Usage: 0
688     $aWC (2008) Subject Usage: 2
750  0 $aCataloging of books for the blind $0(DLC)sh 85020832
```

The index entries for this authority record are shown in the following table:

Keyword Indexes   **Index entries**[2]
    Keywords in all headings   catalog, book, blind, rais, charact
    Keywords in LCSH source heading   catalog, book, blind

Phrase Indexes

    Full headings   cataloging of books for the blind
                                         cataloging of books in raised characters
    Subfield   cataloging of books for the blind
                                         cataloging of books in raised characters
    Full See Also reference   blind books and reading
    LCSH source heading   cataloging of books for the blind

Other Indexes
    FAST authority record number (ARN)   848727
    LCCN for LCSH source heading   sh 85020832
    Facet   topical

QUERY PROCESSING

When searching, the same normalization rules are applied to the query as are applied to the index so it is unnecessary for the user to be familiar with the rules. For the keyword indexes, stopwords are remove and stemming is applied. Unicode is used in the displays and assumed for normalization of the query. Therefore, you can cut and paste terms shown in this interface back into the search box, and the normalization will function properly. Cutting and pasting of non-Latin text from other sources may not work properly unless it is also Unicode.

To help with entering queries, the autosuggest displays a list of headings, ranked by usage and the similarity of the text you have entered to this point. These can be selected as a query or ignored.

SEARCHING

The default search is a simple keyword search of the words in the FAST headings, labeled *Keywords in All Headings*. The index used for the search can be changed using the drop down box to the left of the search box. Keyword, phrase, and other index searching are described below. The Working with Results section describes how to manipulate the results and results display to find what you are looking for.
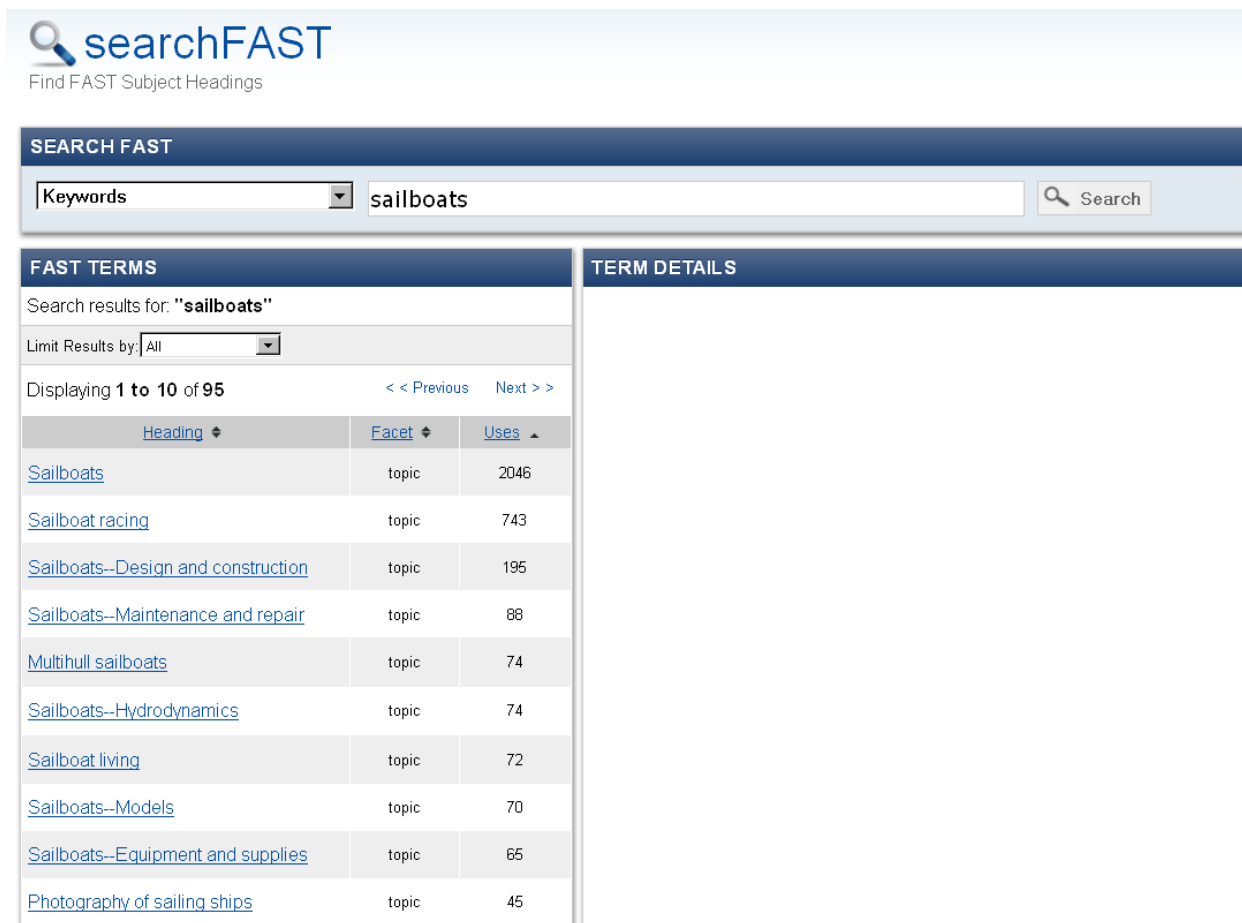
---

[2] The index entries for keywords are stemmed.

Keywords Searching

  A search using the *Keywords in All Headings* box will return all headings that contain the words entered in the query. This option assumes a Boolean AND relationship between all the words in the query and will retrieve all records with headings or cross-references containing those words.

  When in doubt about the type of search to use, this is often a good choice. It is simple and works well if the words in the query are sufficiently explicit to result in a limited number of hits.

  A search for "Sailboats" will result in[3]:

  With stemming, all records with either sailboat or sailboats will be retrieved; 94 records in this case. The default ranking for the result is by usage, with the most popular headings appearing first.

  Individual authority records can be displayed by clicking on the heading. The Working with Results section describes the ways the results list can be modified to help find the desired record. Clicking on **Sailboats--hydrodynamics** produces the following display:

---

[3] Search results will vary depending on when the search is performed. Both the number of headings matching a query and the number of uses will generally increase over time. It is therefore likely that attempts to replicate the results of the examples used in this document will differ from those shown here.

Clicking on the View MARC button at the bottom of the display will display the full MARC record rather than the simple display.

Phrase Searching

There are four phrase indexes: the Full Heading index, the Subfield index, the Full See Also heading index, and the Full LC Source heading index. When searching for a known heading, one method to find and view the record is to take advantage of the "Full Headings" index. For the Full Heading search for **Education–Abstracting and Indexing** is shown below:

This type of search almost always results in the single hit. Since FAST form facet headings are allowed to duplicate a heading from another facet, two results are sometimes possible.

Since the query is normalized, the following queries are equivalent since neither the capitalization nor the punctuation is significant:

```
education abstracting and indexing
Education–Abstracting and Indexing
```

Subfield delimiters and subfields codes can be entered either as a space or dashes.

A search can be performed by searching "education, higher" against the subfield index. Since the query is normalized, it will retrieve all headings with either **Education, Higher** as a main heading or **Education (Higher)** as a subdivision. The initial screen resulting from this search is:

The Full LC Source heading index is used to retrieve a FAST heading by searching the LCSH heading from which the FAST heading was derived. Among other uses, this index is very helpful to identify the FAST heading equivalent to a LCSH heading. The FAST heading corresponding to the LCSH heading **Little Traverse Bay (Mich.)** can be found by searching the LCSH source heading index for "little traverse bay (mich.)". The search produces the following screen since two FAST headings were derived from the same LCSH headings:

The "See Also" phrase can be used to identify all records where that see also phrase is used. This will obtain related entries, in addition to narrower terms where the See Also phrase is identified as broader. A search on Philosophy on this index produces 270 results:

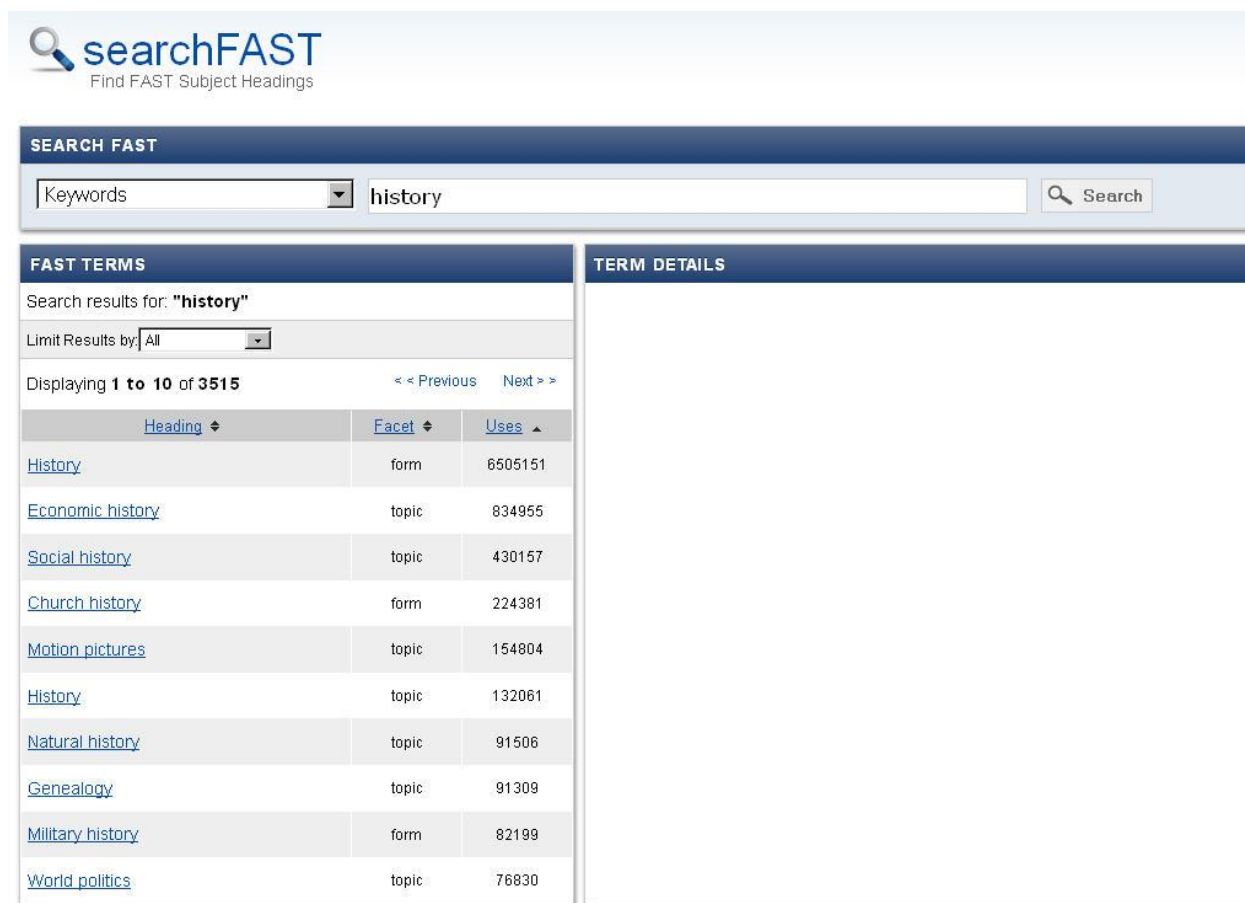## Other Indexes

In addition to the indexes above, there are other specialized indexes:

FAST authority record number is used to retrieve records by their authority record numbers. Either the full number including the prefix (fst00012345) or just the numeric portion (12345) can be entered.

LCCN for LC Source heading index is used to identify a FAST heading using the LCCN for the LCSH heading from which it was derived.

Facet index is not searched directly in the interface, but is used to limit the results to that facet. See the next section for details.

WORKING WITH THE RESULTS

When a large list of results is obtained, several options are available to narrow or redisplay the results. For example, the keyword search for **History** produces over 3500 results as show below.

Using the "Limit Results by" drop down to select the "Uniform Title" facet reduces this list to about 500. These are ordered by usage, so the most used headings are at the top.

Clicking on "Heading" in the gray bar at the top of the results list will change the display to an alphabetically ordered list as shown below.

Sorting can also be by facet, and selecting any entry the second time reverses the order. The results can also be paged through using the Next and Previous links.

AUTOSUGGEST

Both the keyword and phrase indexes have an autosuggest feature. As you type, a list of record headings are displayed that are most similar to what you have typed so far, combined with the frequency of use of that phrase. The keywords and phrases use the same list, but the list is limited to the facet or index you are searching. For example, typing just "pott" while the Limit Results is on Uniform Title, shows several Harry Potter and Beatrix Potter books, any one of which can be selected and used as a query.

OTHER FEATURES

Boolean searches

The interface supports inline Boolean searches, although only on a single keyword index at a time. The Booleans AND, OR, and NOT are supported must be entered as capitals. Parentheses can be used to combine terms.

The query "dog OR cat" retrieves 952 records.

The result can be modified to eliminate records with either diseases or training – dog OR cat NOT (disease OR training), which eliminates more than 50 results, including three from the first page of results.

Wildcards

The wildcard characters * and ? are supported, ? for any single character and * for multiple characters. The main use of the * is in phrases indexes where it can be used for truncation or other pattern substitutions. For example a Full Heading search for "higher education*" retrieves all records with a heading starting with that string.

The effect of wildcards in keyword searches is more difficult to predict. Since keywords are already stemmed, most words are already truncated . The stemming software can't process words with wildcards so no stemming is preformed on words containing wildcards. Some uses are possible though. For example, wom?n obtains results for both women and woman.
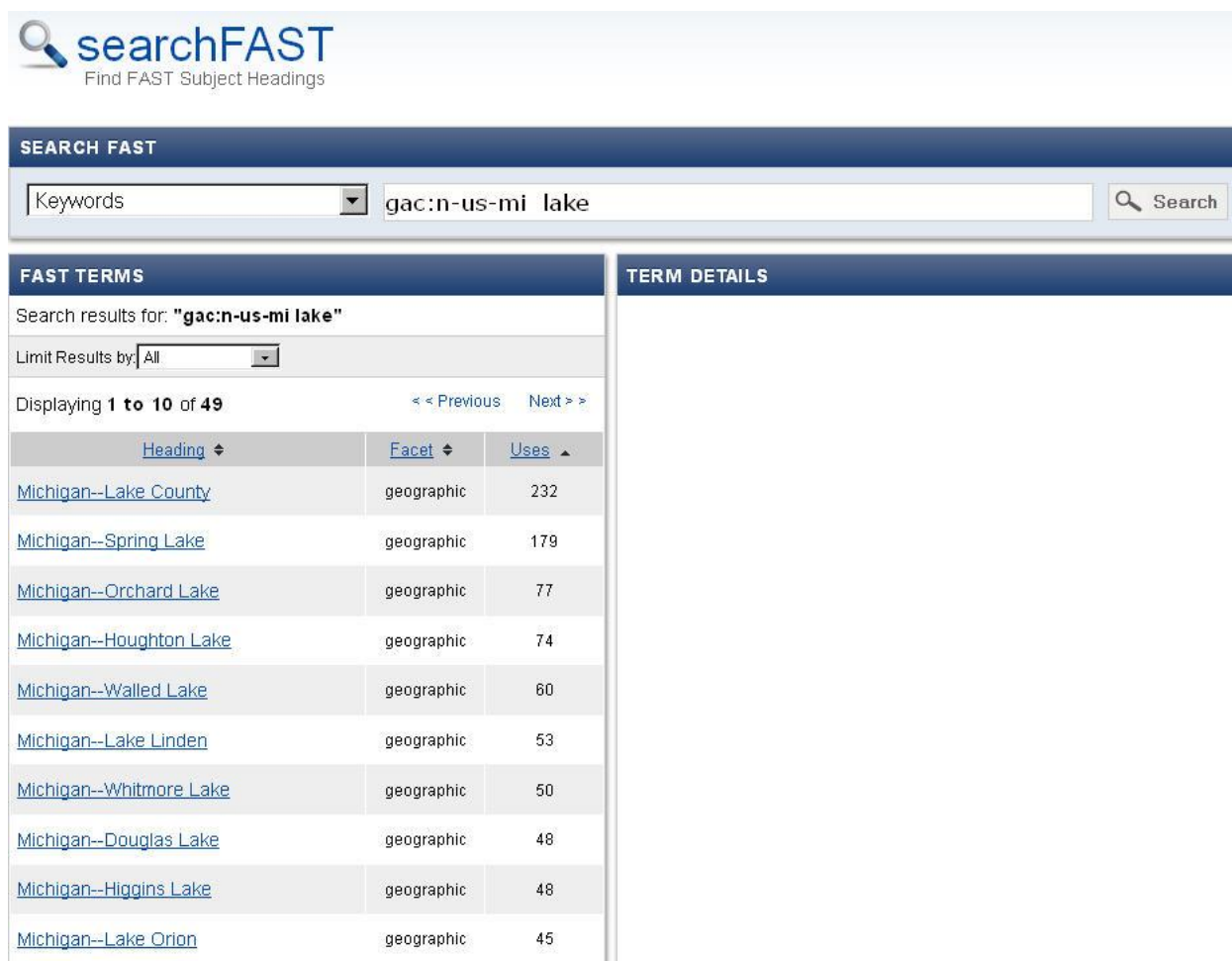
Special search terms

There are three special search terms for attributes in the records not easily accessed by keywords. Two of these are associated with geographic records, and the other with the status of the heading itself.

The record status, in marc terminology, is determined by a character in the record leader. FAST uses new (n), changed (c), deprecated (x), and split (s). Deprecated and split headings should no longer be used, and are kept for reference and to record the headings that replace these headings. New and changed records are appropriate for use. To limit your search to the heading type you are interested in, simple add status:[letter], where the letter is one of the four listed (ncxs). The expected combinations of limiting the search to current headings (status:nc) or obsolete headings (status:xs) are also supported.

 Each geographic record, and several event records, have a geographic area code (GAC) defines, such as n-us-mi for Michigan. If these were normalized as keywords, the dashes would be removed and the indexes would contain 'n', 'us', and 'mi', which would be difficult to search for. Therefore, a special pattern was defined to "trick" the code to handle this special case.

Entering gac:n-us-mi will retrieve everything with a Michigan GAC, and additional keywords can be used in the search. For example, "gac:n-us-mi lake" retrieves 49 records.

A second special term is defined for the geographic feature type[4] that is found in the many records, where the type of location is clearly defined. For example, from the name alone, Spring Lake could be either a lake or a town. Some important feature codes are stream (includes rivers, creeks), lakes, ppl (for populated place), and adm2 (for second level administrative division, such as a county in the United States being a level beneath state, and adm1). For this, the pattern is feature:type.

Modifying the above search to look only for lakes that are clearly defined as such, "gac:n-us-mi feature:lake" gives only 17 results:

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[4] For a complete list of feature types, see Lois Mai Chan and Edward T. O'Neill, *FAST: Faceted Application of Subject Terminology: Principles and Application*. Library Unlimited, Santa Barbara, CA, 2010, Table A-4, page 325-329.

LINKS IN searchFAST

Linked Data

Linked Data is an approach to exposing data in a machine readable form. These links appear on the full records display under the "LINKS TO FULL RECORD" heading. The default link is shown first, with alternate formats following. For machine usage, the desired response format can be requested, retrieving just the raw data. These links are permanent, and can be embedded in other systems. The example for the FAST subject headings is shown below:

searchFAST
Find FAST Subject Headings

SEARCH FAST

| Keywords ▼ | fast | 🔍 Search |

FAST TERMS

Search results for: **"fast"**

Limit Results by: All ▼

Displaying **11 to 20** of **178**   < < Previous   Next > >

Heading ▼	Facet ⇵	Uses ⇵
De jejunio adversus psychicos (Tertullian)	title	1
East African Community. Committee on Fast Tracking East African Federation	corporate	2
FAST (Computer file)	title	4
FAST (Program)	corporate	207
FAST Project	corporate	1
FAST subject headings	topic	3
FEED (Computer file)	title	3
Family System Test	topic	2
Fast Flux Test Facility (Wash.)	corporate	31
Fast and the furious (Motion picture)	title	8

TERM DETAILS

FAST subject headings Find in WorldCat

USED FOR:
Faceted Application of Subject Terminology subject headings

SEE ALSO:
Subject headings--(OCoLC)fst01136458

USAGE:
LC (2011) Subject Usage: 1
WC (2011) Subject Usage: 3

RECORD ID:
fst01750224

SOURCE:
FAST subject headings--(DLC)sh2010008399

LINKS TO FULL RECORD:
Permanent Link http://rdap01dxdu.dev.oclc.org:6098/fast/1750224
MARC-21 record http://rdap01dxdu.dev.oclc.org:6098/fast/1750224/mar
RDF record http://rdap01dxdu.dev.oclc.org:6098/fast/1750224/rdf.xml

view MARC

◁FAST Linked Data

FAST Authority File

SEARCH FAST

Select Keyword Index:

All Headings ▾

Keywords:

[   ]

Search

FAST subject headings

INFORMATION ABOUT THE CONCEPT

PREFERRED LABEL:

FAST subject headings

LINKED DATA IDENTIFIER:

http://id.worldcat.org/fast/1750224

IDENTIFIER:

1750224

ALTERNATIVE LABEL:

Faceted Application of Subject Terminology subject headings

HAS RELATED:

Subject headings

HAS EXACT MATCH:

FAST subject headings

IS IN SCHEME:

http://id.worldcat.org/fast/ontology/1.0/#fast
http://id.worldcat.org/fast/ontology/1.0/#facet-Topical

HISTORY NOTE:

LC (2011) Subject Usage: 1 (en)
WC (2011) Subject Usage: 3 (en)

CHANGE NOTE:

Cataloged by agency: OCoLC (en)
Transcribed by agency: OCoLC (en)

STATUS:

Date Created: 2010-07-12T00:00:00.0
Date Modified: 2010-07-12T13:14:19.0
Language: http://lexvo.org/id/iso639-3/eng

INFORMATION ABOUT THE CONCEPT SOURCE

DOCUMENT:

in Dataset: FAST
Primary Topic: http://id.worldcat.org/fast/1750224

DATA SET:

Title: FAST
License: Open Data Commons

DIFFERENT FORMATS AVAILABLE>

RECORD VIEWS

MARC-21 record
RDF/XML record

Links to WorldCat

While the procedure described above can be used to identify and assign FAST headings, it is also possible to retrieve the WorldCat bibliographic records that have been assigned the FAST heading. This can help in a variety of ways including (1) being able to view examples of bibliographic records where the heading was assigned and (2) providing an alternative means to do a subject search in WorldCat.
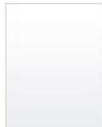
.

The screen in the previous section showed the results of a search for *FAST*. If the Find in WorldCat option is selected, searchFAST links into WorldCat.org and searches for bibliographic records with the heading **FAST subject headings** which produces the following screen[5]:

---

[5] Since FAST subject headings have not yet been added to WorldCat bibliographic records, the search in WorldCat for FAST subject headings must be emulated and the results are not a precise as if FAST subject headings were added to the WorldCat bibliographic records. Generally, the emulation process results in very good recall but less than ideal precision. In many cases, the number of hits in WorldCat will be higher than World Subject Usage. In spite of the limitations of the emulation process, the results are indicative of the potential of this type of search.

At this point, the control has been transferred to WorldCat.org and all the functionality of WorldCat.org is available; selecting any of the three links above will display the bibliographic data for the selected resource, a list of the institution holding the resource, and other similar information.   WorldCat.org also provides a number of options for refining the search that are particularly helpful for queries generating a large number of hits. For resources available online, WorldCat.org offers the option to view the resource. Clicking on the View Now option shown for the third resource will display the resource.