XML Product Data Services Query Parameters and Options

Topics

About

Several XML data services are currently available from OSTI collections. These services search Conference information, Geothermal data and legacy Geothermal data, Hydropower data, Vehicle Technologies data, Information Bridge data, Energy Citations Database data, and DOepatents Database data.

Getting Started

Each XML data service is available from the URLs listed below.

Data Service Name	XML Data Service URL
Conference Information	http://www.osti.gov/conference/
Geothermal/Geothermal Legacy Data	http://www.osti.gov/geoxml/
Hydropower Data	http://www.osti.gov/hydroxml/
FreedomCAR/FCVT Data	http://www.osti.gov/fcvtxml/
Information Bridge Data	http://www.osti.gov/bridge/ibxml/
Energy Citations Database Data	http://www.osti.gov/energycitations/ecdxml/
DOepatents Database Data	http://www.osti.gov/doepatents/xml

This service accepts the parameters discussed below.

Using the XML Data Services

The parameters for each service are: ?CriteriaKeyword= where CriteriaKeyword is replaced by one of the criteria keywords listed below. A blank query will return the entire result set for the given XML Service. The maximum number of records returned per page is 3000. **Please note that criteria keywords are case-sensitive and must be entered as shown in the table below**.

Criteria Keyword	*Data/Field Searched*
searchFor	by all metadata fields and full text
FullText	by document full text only
Biblio	by all bibliographic metadata fields (Title, Author, Subject, etc.) only
Author	by author/creators
Title	by document titles
Language	by document publication language
Country	by document publication country
Subject	by document keywords/subject
Identifier	by document identifying numbers (e.g., report number.)
SponsorOrg	by Sponsoring Organization (e.g. USDOE)
ResearchOrg	by Originating Research Organization
Type	by publication type (e.g., Book, Conference, Technical Report, Dataset etc.)
PubDateFrom	limit results to documents published after the specified date (in MM/DD/YYYY format)
PubDateTo	limit results to documents published before the specified date (in MM/DD/YYYY format)
EntryDateFrom	limit results to documents entering or being updated in IB after the specified date (in MM/DD/YYYY format)
EntryDateTo	limit results to documents entering or being updated in IB before the specified date (in MM/DD/YYYY format)

Example

The URL for a search on "geodesy" in all fields of Geothermal data would be:

http://www.osti.gov/geoxml/?searchFor=geodesy

The results would look similar to the example record below.

```
 <?xml version="1.0" ?>
- <results queryid="0">
```

```
<count exact="false">19266</count>
<display start="1" end="25" />
- <row rownumber="1">
<ostiid>765115</ostiid>
<identifier>DOE/ID/13680</identifier>
<title>Advanced Geothermal Turbodrill</title>
<authors>W. C. Maurer</authors>
<pubdate>2000 May 01</pubdate>
<sponsororg>USDOE Office of Geothermal Technologies (EE-12) (US)</sponsororg>
<researchorg>USDOE Idaho Operations Office, Idaho Falls, ID; Maurer Engineering, Inc.,
    Houston, TX (US)</researchorg>
<language>English</language>
<entrydate>2006 Aug 24</entrydate>
<resourcetype>Technical Report</resourcetype>
<fulltext size="4998592"
    mimetype="application/pdf">http://www.osti.gov/geothermal/servlets/purl/765115-
    MDkgZE/webviewable/</fulltext>
<citation>http://www.osti.gov/geothermal/product.biblio.jsp?osti_id=765115</citation>
<subject>15 GEOTHERMAL ENERGY; 03 NATURAL GAS; GEOTHERMAL ENERGY;
    GEOTHERMAL FIELDS; GEOTHERMAL FLUIDS; GEOTHERMAL POWER
    PLANTS; GEOTHERMAL RESOURCES; GEOTHERMAL WELLS; IGNEOUS
    ROCKS; METAMORPHIC ROCKS; NATURAL GAS WELLS;
    TURBODRILLS</subject>
<subjectrelated>Geothermal Legacy; POWER PLANT; GEOTHERMAL WELLS;
    CRYSTALLINE ROCK FORMATIONS; DOWNHOLE TEMPERATURE; FLUID
    COMMUNICATION; DIRECTIONAL WELL; FRACTURES; HOT GEOTHERMAL
    FLUIDS; ELASTOMERS; TURBODRILL</subjectrelated>
</row>
```

1.0: Wildcards

Queries using wildcard operators can be performed. The asterisk (*) is used to search for words with spelling variations or contain a specified pattern of characters.

Example

The following URL will return all the items with "sustain" and any words with "sustain" as a stem in the title of Conference Information.

http://www.osti.gov/conference/?Title=sustain*

The following truncated results are returned. The search term has been highlighted.

```
<title>Current sustained by a travelling wave with phase velocity increasing in time</title>
<title>Nuclear energy for the preservation of the global environment and sustainable
        development</title>
<title>Self sustaining fusion reactor by dynamo action</title>
<title>Current sustainment of a field-reversed configuration by rotating magnetic
        field</title>
```

However, some wildcard searches may be too broad and will not return records. If the following search parameters are entered, then the term expands too far and the server will not return any results. For example, a full text search for the term en* is too broad to return results.

http://www.osti.gov/conference/?Title=en*

The URL returns an error similar to the example below.

An Error Occurred

There was a processing error performing your request.

This page appears when something happens that was not foreseen in this system?s design. It could be something in your query or some unexpected event in the system. Please try again.

Error Message:

```
SQL Error: Results.lookup(): ORA-20000: Oracle Text error:
DRG-10800: query failed:
DRG-51030: wildcard query expansion resulted in too many terms

ORA-06512: at "CTXSYS.DRUE", line 160
ORA-06512: at "CTXSYS.CTX_QUERY", line 111
ORA-06512: at "DUB_CORE.QUICK_COUNT", line 11
```

1.1: Multiple Search Terms

Multiple search terms and terms that require spaces can be separated by the plus symbol (+) or using the Boolean AND operator.

Example

The URL for a search for "particle" and "accelerator" on Information Bridge would be:

http://www.osti.gov/bridge/ibxml/?searchFor=particle+accelerator

or:

http://www.osti.gov/bridge/ibxml/?searchFor=particle%20AND%20accelerator

The characters, %20, must be added before and after the AND operator.

The following truncated results are returned. Search terms have been highlighted.

```
    <?xml version="1.0" encoding="UTF-8" ?>
- <rdf:RDF xmlns:dc="http://purl.org/dc/elements/1.1/"
    xmlns:dcq="http://purl.org/dc/terms/" xmlns:rdf="http://www.w3.org/1999/02/22-rdf-
    syntax-ns#">
- <records queryid="0" count="29014" morepages="true" start="1" end="100">
```

```
- <record rownumber="1">
  <dc:title>Particle-beam fusion research facilities at Sandia National Laboratories</dc:title>
  <dc:creator>NONE</dc:creator>
  <dc:subject>70 PLASMA PHYSICS AND FUSION; INERTIAL CONFINEMENT;
      PARTICLE BEAM FUSION ACCELERATOR; ION BEAMS; ELECTRON BEAMS;
      X-RAY SOURCES; BEAM PRODUCTION; INERTIAL FUSION
      DRIVERS</dc:subject>
  <dc:subjectRelated />
  <dc:description>Sandia research in inertial-confinement fusion (ICF) is based on pulse-
      power capabilities that grew out of earlier developments of intense relativistic electron-
      beam (e-beam) radiation sources for weapon effects studies. ICF involves irradiating a
      deuterium-tritium pellet with either laser light or particle beams until the center of the
      pellet is compressed and heated to the point of nuclear fusion. This publication focuses
      on the use of particle beams to achieve fusion, and on the various facilities that are
      used in support of the particle-beam fusion (PBF) program.</dc:description>
```

Searches using the Boolean OR operator can also be performed, retrieving records with one search term or the other.

Example

The URL for a search for "particle" or "accelerator" on Information Bridge would be:

http://www.osti.gov/bridge/ibxml/?searchFor=particle%20OR%20accelerator

Like the AND operator, the characters, %20, must be added before and after the OR operator.

1.2: Exact Phrase Search

Exact phrases can be searched by surrounding the search terms in double quotation marks (" ").

Example

The following URL searches records containing the exact phrase "particle accelerator" in the title of Information Bridge data.

http://www.osti.gov/bridge/ibxml/?Title="particle accelerator"

The following truncated results are returned. The search phrase has been highlighted

```
  <dc:title>Laser Particle Accelerator Program</dc:title>
  <dc:title>Particle-accelerator decommissioning</dc:title>
  <dc:title>An active particle accelerator</dc:title>
  <dc:title>Automation of particle accelerator control</dc:title>
```


1.3: Search Options

The following table lists various search options that can be used to sort results.

Additional Criteria Keywords	*Search Option*
SortBy	Sort results by a field name. Valid field names include: publication_date, creator, title, date_entry, publisher_sponsor, publisher_research, and relv (relevance score). By default, searches are sorted by relevance.
SortOrder	Selects the direction of the sort, either ASC (ascending) or DESC (descending). The default is DESC.
query_id	Indicates the ID of a query previously performed in a browser session.
nrows	Indicates the number of records desired per page of results. Once this value is specified, it is retained for all other searches in the search session. The default number of results per page for IB and ECD is 100. The maximum number of records returned per page is 3000.
page	Request a particular page of search results. The first page of results is returned by default.

One or more search options may be specified in the URL. Specify each as with search criteria, separated by ampersands ("&"). The number of desired results per page and an option to request additional pages of information may also be specified.

1.4: Sorting

Results may be sorted by a number of specifications including: publication_date, creator, title, date_entry, and relv (relevance). Results can be sorted either in ascending (ASC) or descending (DESC) order. Results are sorted in descending order by default.

Example

The URL for an IB search for the exact phrase "particle accelerator" in the full text field sorted by the date of publication would be:

http://www.osti.gov/bridge/ibxml/?FullText="particle accelerator"&SortBy=publication_date

1.5: Session Management

After an initial query is performed, the XML returned will indicate a query id value. This query id should be retained and used for subsequent requests pertaining to the same query (e.g., for requesting additional pages of search results or sorting the existing query with other search options). This query id is maintained for the duration of a search session, usually about 30 minutes of activity.

Example

The example search in the Sorting section above requests results with the exact phrase "particle accelerator" in the full text field sorted by publication date. The search returns a query id value of 0. The following URL sorts the same set of results by creator using the query id value.

http://www.osti.gov/bridge/ibxml/?query_id=0&SortBy=creator

The query id value is found near the top of the XML results.

- <records queryid="**0**" count="**17771**" morepages="**true**" start="**1**" end="**100**">

1.6: Requesting Additional Pages

By default, a search request returns the first page of results if additional pages are available. The page search option can return multiple pages of search results. The maximum records per page returned is 3000; to access additional records use the page parameter. **Please note that the page count begins at zero (0).**

Example

The example search in the Session Management section above uses a query_id value of 0 obtained from a previous search for the exact phrase "particle accelerator". The first page of results is displayed sorted by creator. The second page of results can be obtained with the following URL.

http://www.osti.gov/bridge/ibxml/?query_id=0&page=1

The number of records (count), starting record, and end record are found near the top of the XML results.

- <records queryid="**0**" count="**17771**" morepages="**true**" start="**101**" end="**200**">

The "morepages" tag indicates whether or not additional pages for a specific search are available. If additional pages are available, then the tag reads: morepages="**true**". If additional pages are not available, then the tag reads: morepages="**false**".

1.7: Additional Search Options

Some of the data XML services may specify additional searching options. These special criteria apply only to those particular data services.

Additional Criteria Keywords	*Search Option Selected*	*XML Service*
collection	Specifies the type of collection to search: "G" indicates GEOTHERMAL ONLY, "L" indicates GEOTHERMAL LEGACY DATA ONLY. The	Only applies to the **Geothermal XML Data Service**

Additional Criteria Keywords	Search Option Selected	XML Service
	default is to search both collections of data.	
PatentNumber	Searches for a specified patent number	Only applies to the **DOE Patents Database XML Data Service**
PatentApplicationNumber	Searches for a specified patent application number	Only applies to the **DOE Patents Database XML Data Service**
Inventors	search within author only	Only applies to the **DOE Patents Database XML Data Service**
LabTechCenter	search within originating_research_org only	Only applies to the **DOE Patents Database XML Data Service**
SponsoringOffice	search within sponsor_org only	Only applies to the **DOE Patents Database XML Data Service**
ContractNo	search within contract_nos only	Only applies to the **DOE Patents Database XML Data Service**
Assignee	search within patent_assignee only	Only applies to the **DOE Patents Database XML Data Service**
Abstract	search within description only	Only applies to the **DOE Patents Database XML Data Service**
Availability	by availability	Only applies to the **Energy Citations Database XML Data Service**
DatasetType	search within Dataset Type. Code values must be used: **ND** (Numeric Data), **IP** (Still Images or Photos), **IM** (Interactive Data Map(s)), **GD** (Genome Data), or **AS** (Animations/Simulations)	Only applies to the **Energy Citations Database XML Data Service**
FullTextMatch	Returns all records that have (**=1**) or do not have (**=0**)associated electronic full text	Only applies to the **Energy Citations Database XML Data Service**

1.8: Additional Formats

Results may be returned in Comma-Separated Values (CSV) format by using the "format" parameter.

Example

The URL for an IB search for the exact phrase "particle accelerator" in the full text field retuned in CSV format would be:

http://www.osti.gov/bridge/ibxml/?FullText="particle accelerator"&format=csv

1.9: Helpful Tips

By default, results are sorted by relevance. While relevance sorting is helpful in some circumstances, sorting results by publication date might be more helpful in most other situations. This ensures the results viewed first are the most up-to-date records.

The examples provided in this document were copied from XML results in Microsoft Internet Explorer. Results may appear slightly different in other browser windows.

http://www.osti.gov/bridge/ibxml/?FullText="particle accelerator"&format=csv