Advanced Search

Naomi Dushay & Jessie Keck
(& Jennifer Vine)
http://searchworks.stanford.edu/advanced
“Is there no "advanced search," no way to search multiple fields at once, e.g. author and title? That seems incredible. Am I missing something obvious?”

“The faceted searching is nice but if I want to limit my results via my search query, I cannot because there is no "advanced" search... I will have to enter my search term and then wait for the results to appear before being able to refine the search by clicking on the links that appear to the left of the results. “

“When are we going to get "advanced searching"? Faculty and graduate students need that and I am sure some undergrads would appreciate it too”
“The faceted searching is nice but if I want to limit my results via my search query, I cannot because there is no "advanced" search ... I will have to enter my search term and then wait for the results to appear before being able to refine the search by clicking on the links that appear to the left of the results. “

“Sometimes we need that kind of precision searching as a starting point. I find that I can enter an author and a title and get a good result in this version, but what about other limits on the first entry, such as dates or formats. I would prefer to get a list of hits with previously set limits, rather than setting/focusing the limits after the initial search.”
Author + Title

“I would like to see combined searching feature so that I can specify the author and title.”
Search: mozart sonata 21

1. Mozart [sound recording]
   Title: Selections
   Author/Creator: Mozart, Wolfgang Amadeus, 1756-1791.
   Published: 2005
   At the Library: Music » Recordings » MCD 10573
   Format: Music - Recording

2. The Mozart piano sonatas, vol. II [sound recording]
   Title: Sonatas, piano. Selections
   Author/Creator: Mozart, Wolfgang Amadeus, 1756-1791.
   Published: 1969
   At the Library: SAL3 » Paging restricted to Music or Green Media-Microtext » MD 15
   Format: Music - Recording

3. Mozart, Elgar [sound recording]
   Author/Creator: Sammons, Albert, 1886-1957.
   Published: 2003
   At the Library: Music » Recordings » MCD 17517
   Format: Music - Recording

4. The secret Mozart [sound recording] : works for clavichord
   Title: Piano music. Selections
   Author/Creator: Mozart, Wolfgang Amadeus, 1756-1791.
   Published: 2006
   At the Library: Music » Recordings » MCD 13136
   Format: Music - Recording

5. Sonata XIV.
   Title: Sonatas, piano, K. 310, A minor
   Author/Creator: Mozart, Wolfgang Amadeus, 1756-1791.
   Published: 1918
   At the Library: Music » Box Collection » M23
   Format: Music - Recording
Personal Name

Art cataloging practices are inconsistent: personal name can be author, subject, added author ...
Subject
Author & Subject

Subjects
- Pollock, Jackson, 1912-1956 > Exhibitions.
- Indian art > North America > Exhibitions.
- Shamanism in art > Exhibitions.

Author/Creator: Pollock, Jackson, 1912-1956.
Published: Paris : Pinacothèque de Paris, [2008]
Format: Book
Physical Desc.: 266 p. : ill. (some col.), map ; 28 cm.
Language: French
ISBN: 9782953054675
2953054677
Bibliography: Includes bibliographical references.
Contributor: Restellini, Marc.
Desmazières, Hélène.
Polcari, Stephen.
Klein, Mickie.
Pinacothèque de Paris.

AT THE LIBRARY
Art - Stacks
N6537 .P57 A4 2008

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Find it at other libraries via WorldCat

RELATED E-RESOURCES
More about this book at Google Books

TECH DETAILS
- Callno: 7837994
- Compare in Socrates
- Librarian View
Painters painting [videorecording] / Turin Film Corp.; a film by Emile de Antonio and Mary Lampson; produced and directed by Emile de Antonio.

Published: New York, NY: Anthouse Films; [Distributed by] Arts Alliance America, [2009]

Format: Video

Physical Desc.: 1 videodisc (116 min.): sd., col. with b&w sequences; 4 3/4 in.

Language: English

Publisher No.: 670549 Anthouse Films


Production Credits: Photography, Ed Emshwiller; editor and sound, Mary Lampson.

Participant: Prologue by Philip Leider.

Summary: Emile de Antonio was a close friend to many New York painters who later went on to become famous. He filmed and interviewed them informally in their studios. Artists included are Willem de Kooning, Andy Warhol, Robert Motherwell, Barnett Newman, Jules Olitski, Frank Stella, Robert Rauschenberg, Jasper Johns, Helen Frankenthaler, Kenneth Noland, Larry Poons, Philip Pavia, and Hans Hoffman.

Format: DVD.

Contributor: De Antonio, Emile.
Lampson, Mary.
Emshwiller, Ed.
Leider, Philip, 1929-.
Stella, Frank.
Johns, Jasper, 1930-.
Pollock, Jackson, 1912-1956.
Noland, Kenneth, 1924-.
Others, 50s-2007.
<table>
<thead>
<tr>
<th>Subjects</th>
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<tbody>
<tr>
<td>Pollock, Jackson, 1912-1956 &gt; Criticism and interpretation.</td>
</tr>
<tr>
<td>Abstract expressionism &gt; United States.</td>
</tr>
<tr>
<td>Painters &gt; United States.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Jackson Pollock / Carolyn Lanchner.</th>
</tr>
</thead>
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<tr>
<td><strong>Author/Creator:</strong> Lanchner, Carolyn.</td>
</tr>
<tr>
<td><strong>Published:</strong> New York : Museum of Modern Art : Distributed by D.A.P./Distributed Art Publishers, c2009.</td>
</tr>
<tr>
<td><strong>Format:</strong> Book</td>
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<tr>
<td><strong>Physical Desc.:</strong> 48 p. ; ill. (chiefly col.) ; 21 cm.</td>
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<tr>
<td><strong>Language:</strong> English</td>
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<tr>
<td><strong>ISBN:</strong> 9780370707698</td>
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<td><strong>Contributor:</strong> Pollock, Jackson, 1912-1956, Museum of Modern Art (New York, N.Y.)</td>
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</table>

**Browse around**
ND237 .P73 L34 2009

<table>
<thead>
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<th>Browse left</th>
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<tbody>
<tr>
<td>Jackson Pollock</td>
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<tr>
<td>Lanchner, Carolyn (2009)</td>
</tr>
<tr>
<td>Marlborough Fine Art Ltd. (1961)</td>
</tr>
<tr>
<td>Kligman, Ruth</td>
</tr>
<tr>
<td>Love affair</td>
</tr>
</tbody>
</table>

**Browse right**

**AT THE LIBRARY**
Art - Stacks

**RELATED E-RESOURCES**
More about this book at Google Books

**TECH DETAILS**
- Catkey: 8439953
- Compare in Socrates
- Librarian View
Combining Multiple Facet Values

“I would love to be able to select multiple facets... For example, I would like to do a search then limit to Book *and* Video.”

“permit the selection of multiple characteristics from the browsing panel on the right. For instance, I often find myself looking for sources in both Spanish and English, and it would be great to select both of these criteria and search for all those books that are in either Spanish or English. The same would be great, too, for searching a variety of different library facilities, etc. at the same time.”

“option to limit queries by multiple locations using check boxes.”
Publisher + Place + Date

“How do I search by publisher AND place AND year all at the same time? For example … "Instress, Saratoga, 1999" … I often search publisher AND year, or publisher AND place of publication, and occasionally need all three terms in combination.”
<table>
<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>Author/Creator</th>
<th>Published</th>
<th>At the Library</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Little brown jail [sound recording]</td>
<td>Lamour, Dorothy, 1914-1996.</td>
<td>1944</td>
<td>ARS » Recordings » DECCA 23322</td>
<td>Music - Recording</td>
</tr>
<tr>
<td>2</td>
<td>The little brown girl : a story for children</td>
<td>Stuart, Esmé, b. 1851.</td>
<td>1877</td>
<td>SAL3 » Stacks » PR5499 .S22 L58 1877</td>
<td>Book</td>
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<tr>
<td>3</td>
<td>Little brown jug [sound recording] : fox trot</td>
<td>Miller, Glenn, 1904-1944.</td>
<td>1939</td>
<td>ARS » Recordings » VICTOR B-10286</td>
<td>Music - Recording</td>
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<tr>
<td>6</td>
<td>That strange little brown man Gandhi</td>
<td>Fisher, Frederick Bohn, Bishop, 1882-1932</td>
<td>1932</td>
<td>SAL3 » Stacks » 954.28 .G195FF</td>
<td>Book</td>
</tr>
</tbody>
</table>
Boolean OR

“… lesbian OR gay …”

“… uighur OR uyghur OR uyghar OR uigher …”

“… france OR french …”

“… themes OR symbolism …”
You don't have any searches or limits applied. To get started, type a search above or click one of the limits on the left side of the screen.

Recently Added Items
98 results for water rights out of at least 18,300,000 (Details)

Federal Forms

- Form R (EPA Form 9350-1)
  Source: Forms.gov

Water Rights
Superior Court > Adjudications Arizona’s General Stream Adj. proceedings to determine the extent and priority of all water...
www.superiorcourt.maricopa.gov/SuperiorCourt/Adjudications

Utah Division of Water Rights
State of Utah, Division of Water Rights regulates water ... Ra extent that rainwater is actually stored and then later used for...
www.waterrights.utah.gov - Cached - More from Utah

Water Resources Program - Water Rights
Main page for Washington State Department of Ecology's water exemptions, relinquishment, reports of examination, changes, ...
www.ecy.wa.gov/programs/wr/rights/water-right-home.html - C

State Water Resources Control Board - Water Rights
The State Water Resources Control Board web site covers C...
Any
Of these words

All
Of these words

None
Of these words
### Advanced Search

**Find web pages that have...**
- all these words: [input field]
- this exact wording or phrase: [input field]
- one or more of these words: [input field]

**But don't show pages that have...**
- any of these unwanted words: [input field]

**Need more tools?**
- Results per page: [dropdown menu with option 100 results]
- Language: [dropdown menu with option any language]
- File type: [dropdown menu with option any format]
- Search within a site or domain: [input field]
  (e.g. youtube.com, edu)

[**Date, usage rights, numeric range, and more**](#)
Zoom In. Find More.

Try Lens to discover connections and find resources on your topic—books, journals, e-journals, archives and more. See the FAQ to find out more, and let us what you think so we can continue to make improvements.

Search
- Enter your query in the text box above
- The central panel displays your search results, ranked by relevance
- Click on a title to view a full record, including publication information, library locations, and availability
- Advanced Search allows searching by title, author, or keyword

Discover
- The left panel displays a constellation of related terms, spelling variations and translations of your search terms
- Click on words in the word cloud to explore other terms in the catalog

Refine
- The right panel displays terms found within the records of your results
- Click on any term to focus and narrow your results

Other Resources:
Library Catalog | Other Catalogs | Interlibrary Loan | Purchase Request | My Account | Ask a Librarian

Lens Home | Text-only | My Library Account | Feedback
Library Home | Library Catalog
powered by AquaBrowser Library®
Database Name: Cornell University Library

<table>
<thead>
<tr>
<th>Basic Search</th>
<th>Guided Keyword Search</th>
<th>Course Reserve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search for:</td>
<td>Search for:</td>
<td>Search in:</td>
</tr>
<tr>
<td>OR: all of these</td>
<td>OR: all of these</td>
<td>Keyword Anywhere</td>
</tr>
<tr>
<td>OR: all of these</td>
<td>OR: all of these</td>
<td></td>
</tr>
<tr>
<td>OR: all of these</td>
<td>OR: all of these</td>
<td></td>
</tr>
</tbody>
</table>

50 records per page

More Information on these searches

Guided Keyword Search

If applying Search Limits (date, language, format, etc.), set them **before** entering search terms.

Use `?` with partial words to find variant endings: `manage?` finds manager, managers, management, etc.

Select specific fields (series, publisher, etc.) to refine your search.

To automatically combine searches with AND, go to **Search History** and select the searches to be combined.
SearchWorks

Search tips
Select "match all" to receive all fields - e.g.:
  Name: Steinbeck
  Title: Pearl

Select "match any" to receive at least one field - e.g.:
  Name: John Steinbeck
  Subject: John Steinbeck
  (to find items by or about Steinbeck)
Combine keywords and attributes to find specific items - e.g.:
  Title: New York Times
  Format: Newspaper

Within fields:
  click ? to find out what is searched in a field.
  all words in a field are required, unless you specify otherwise.

Use "OR" to search alternate words - e.g.:

Advanced Search

Find items that match all of the fields below:

Name (of author, creator, organization, performer, etc.)
Title
Subject terms
Keywords in item description (only in ToC/Summary)

AND have these attributes:

Access
  - At the Library (5,653,862)
  - Online (774,780)
Format
  - Book (5,488,052)
  - Computer File (3,491)
  - Conference Proceedings (185,570)
  - Image (3,046)
  - Journal/Periodical (287,098)
  - Manuscript/Archive (12,199)
  - Map/Globe (56,674)
  - Microformat (267,698)
  - Music - Recording (71,913)
  - Music - Score (60,898)
  - Newspaper (5,058)
  - Other (83,425)
  - Sound Recording (3,379)
  - Thesis (106,523)
  - Video (43,069)

Language
  - Call Number
  - Location

Sort results by relevance

Checkbox Facets

Author + Title
Personal Name
Publication
Boolean
Keyword is not first!
A: not in advanced search scenarios

“Keywords in item description”? A: expectation of full text

“Subject terms”? A: need to convey controlled vocabulary
- Users Miss “Sort results by” at bottom
- Users Don’t Understand “Keyword in item description,” so they don’t use it.
- Personal Name Scenario: to seek “creator or subject,” you must enter name twice.
- Author + Title not yet indexed properly – false hits
- Phrases (with quotes) don’t get results
- Range of Publication Dates desired
- Subject Refinements (Region, Genre ...)

---

**SearchWorks**

**Search tips**

Select "match all" to require all fields - e.g.:  
Name: Steinbeck  
Title: Pearl

Select "match any" to find at least one field - e.g.:  
Name: John Steinbeck  
Subject: John Steinbeck  
(to find items by or about Steinbeck)

Combine keywords and attributes to find specific items - e.g.:  
Title: New York Times  
Format: Newspaper

Within fields:  
- click ? to find out what is searched in a field.  
- all words in a field are required, unless you specify otherwise.

Use "OR" to search alternate words - e.g.:  

---

**Advanced Search**

Find items that match

- Name (of author, creator, organization, etc.)
- Title
- Subject terms
- Keywords in item description
- Publisher, place, year
- ISBN/ISSN or other numbers

**Sort results by** relevance

---

**Task Us**
<table>
<thead>
<tr>
<th>Feature</th>
<th>Lucene</th>
<th>Dismax</th>
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<tbody>
<tr>
<td>Boolean</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Each Text Box -&gt; Groups of Index Fields</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Each Text Box -&gt; Complex Boosting Equation</td>
<td>yuck</td>
<td>✓</td>
</tr>
<tr>
<td>Multiple Text Boxes</td>
<td>yuck</td>
<td>✓</td>
</tr>
<tr>
<td>Multiple Query Words Match Across Fields</td>
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<td>✓</td>
</tr>
<tr>
<td>Boosting Matches Simple “Author” “Title” “Subject” Searches</td>
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<td>✓</td>
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<lst name="defaults">
  <str name="defType">dismax</str>
  <str name="echoParams">explicit</str>
  <str name="sort">score desc, pub_date_sort desc, title_sort asc</str>
  <str name="q.alt">*:*</str>
  <str name="mm">4&lt;1 4&lt;90%</str>
  <str name="qp">1</str>
  <str name="qf">
    author_1xx_unstem_search^200
    author_7xx_unstem_search^50
    author_8xx_unstem_search^10
    author_1xx_search^20
    author_7xx_search^5
    author_8xx_search
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<td>Each Text Box -&gt; Multiple Index Fields</td>
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<td>yuck</td>
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<tr>
<td>Multiple Text Boxes</td>
<td>yuck</td>
<td>✓</td>
</tr>
<tr>
<td>Multiple Query Words Match Across Fields</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Boosting Matches Simple “Author” “Title” “Subject” Searches</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
"Advanced search: "nabokov pushkin" in "Name [creator]" gives only 1 hit ... But this search fails to retrieve ... “
<str name="qf">
  author_1xx_unstem_search^200
  author_7xx_unstem_search^50
  author_8xx_unstem_search^10
  author_1xx_search^20  vern_author_1xx_search^20
  author_7xx_search^5   vern_author_7xx_search^5
  author_8xx_search     vern_author_8xx_search
</str>

<str name="pf">
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  author_7xx_unstem_search^3000
  author_1xx_search^500  vern_author_1xx_search^500
  author_7xx_search^300   vern_author_7xx_search^300
  author_8xx_unstem_search^250
  author_8xx_search^200   vern_author_8xx_search^200
</str>
LocalParams

LocalParams stands for local parameters: they provide a way to "localize" information about a document.
qt=search_author & q=pushkin nabokov & debugQuery=true

<str name="parsedquery">+( ((DisjunctionMaxQuery(author_8xx_search:pushkin author_8xx_unstem_search:pushkin^10.0 | author_1xx_unstem_search:pushkin^200.0 | author_1xx_search:pushkin^20.0 | vern_author_1xx_search:pushkin^20.0 | author_7xx_search:pushkin^5.0 | author_7xx_unstem_search:pushkin^50.0 | vern_author_8xx_search:pushkin | vern_author_7xx_search:pushkin^5.0)^0.01))~2)

DisjunctionMaxQuery((author_8xx_search:nabokov author_8xx_unstem_search:nabokov^10.0 | author_1xx_unstem_search:nabokov^200.0 | author_1xx_search:nabokov^20.0 | vern_author_1xx_search:nabokov^20.0 | author_7xx_search:nabokov^5.0 | author_7xx_unstem_search:nabokov^50.0 | vern_author_8xx_search:nabokov | vern_author_7xx_search:nabokov^5.0)^0.01))~2)

DisjunctionMaxQuery((author_8xx_search:"pushkin nabokov"^3^200.0 | author_8xx_unstem_search:"pushkin nabokov"^3^250.0 | author_1xx_unstem_search:"pushkin nabokov"^3^500.0 | author_1xx_search:"pushkin nabokov"^3^500.0 | vern_author_1xx_search:"pushkin nabokov"^3^500.0 | author_7xx_search:"pushkin nabokov"^3^300.0 | author_7xx_unstem_search:"pushkin nabokov"^3^3000.0 | vern_author_8xx_search:"pushkin nabokov"^3^200.0 | vern_author_7xx_search:"pushkin nabokov"^3^300.0)^0.01)

</str>
**Solr Requirements for Advanced Search**

This approach to Blacklight Advanced Search is predicated on the following requirements:

1. **Boolean syntax must be supported**
2. **Groups of Solr fields must be searched for individual text boxes in the html search form.**
3. The group of Solr fields for a single text box have different weights among themselves (query terms matched in particular Solr fields in the group have different boost factors than query term matches in other Solr fields in the group)

**Mapping Text Boxes in Advanced Search Form to Solr query pieces**

Each text box (or check box) in the advanced search query form maps to a particular set of Solr fields and boosting values (plain boosting and phrase boosting) to be used in the Solr query. The particular fields and boost values (and phrase fields and boost values) for each text box will be configured on the Solr server, via the “advanced” request handler.

The user query itself is also transformed; see below under “Query Transformation”.

For each text box containing user-supplied text, there will be a chunk in the value of q sent to solr that looks like this:

```
_query : “{%dismax qf=${qf_name1} pf=${pf_name1}}{xform-query-terms}”
```

Pieces in square brackets will be replaced with specific strings. The bold are all part of the actual string sent to solr: quotes, curly braces, exclamation point and dollar signs are all sent to Solr.

So if the user has typed into two text boxes, and the text boxes are to be combined (AND), then the q param sent to Solr would have this form:

```
g=_query : “{%dismax qf=${qf_name1} pf=${pf_name1}}{xformed-query-terms1}”

AND
_query : “{%dismax qf=${qf_name2} pf=${pf_name2}}{xformed-query-terms2}”
```

If the user chooses to combine the text boxes with an “OR”, the q param sent to Solr would have this form:
Mapping Text Boxes in Advanced Search Form to Solr query pieces

Each text box (or check box) in the advanced search query form maps to a particular set of Solr fields and boosting values (plain boosting and phrase boosting) to be used in the Solr query. The particular fields and boost values (and phrase fields and boost values) for each text box will be configured on the Solr server, via the “advanced” request handler.

The user query itself is also transformed; see below under “Query Transformation”.

For each text box containing user-supplied text, there will be a chunk in the value of q sent to solr that looks like this:

```
_query_:"!dismax qf=$[qf_name1] pf=$[pf_name1]}[xform-query-terms]"
```

Pieces in square brackets will be replaced with specific strings. The bold are all part of the actual string sent to solr: quotes, curly braces, exclamation point and dollar signs are all sent to Solr.
_query_:

```
{!dismax qf=$qf_author pf=$pf_author}[xformed-query-terms]"
```

<!-- for user query terms in author text box -->

```xml
<str name="qf_author">
    author_1xx_unstem_search^200
    author_7xx_unstem_search^50
    author_8xx_unstem_search^10
    author_1xx_search^20    vern_author_1xx_search^20
    author_7xx_search^5    vern_author_7xx_search^5
    author_8xx_search    vern_author_8xx_search
</str>

<str name="pf_author">
    author_1xx_unstem_search^5000
    author_7xx_unstem_search^3000
    author_1xx_search^500    vern_author_1xx_search^500
    author_7xx_search^300    vern_author_7xx_search^300
    author_8xx_unstem_search^250
    author_8xx_search^200    vern_author_8xx_search^200
</str>
```
_query_:”{!dismax qf=$qf_title pf=$pf_title}[xformed-query-terms]”
Combining Text Boxes  (boolean)

So if the user has typed into two text boxes, and the text boxes are to be combined (AND), then the q param sent to Solr would have this form:

```
q=_query_:{!dismax qf=$[qf_name1] pf=$[pf_name1]}[xformed-query-terms1]"
```

If the user chooses to combine the text boxes with an “OR”, the q param sent to Solr would have this form:

```
q=_query_:{!dismax qf=$[qf_name1] pf=$[pf_name2]}[xformed-query-terms1]"
```

At this time, the qt argument for the Solr request MUST be set to a standard request handler (in our case, “advanced”). Otherwise Solr will always return 0 results.
<! -- advanced search requests; 
|use q_query: "{!dismax qf=$qf1 pf=$pf1 mm=$mm ps=$ps tie=$tie} [transformed-q1] AND query: "{!dismax qf=$qf2 pf=$pf2} [transformed-q2] --> 

<requestHandler name="advanced" class="solr.SearchHandler" >
  <lst name="defaults">
    <str name="defType">lucene</str>
    <str name="echoParams">Explicit</str>
    <str name="rows">20</str>
    <str name="df=ttl_search</str>
    <str name="q.op">AND</str>
    <str name="qs">1</str>
    <str name="sort">score desc, pub_date_asc desc, title_sort asc</str>
  </lst>

  <!-- used for dismax query parser -->
  <str name="mm">1</str>
  <str name="ps">3</str>
  <float name="tie">0.01</float>

  <!-- for user query terms in author text box -->
  <str name="qf_author">
    author_1xx_unstem_search^200
    author_2xx_unstem_search^50
    author_8xx_unstem_search^10
    author_1xx_search^20
    author_7xx_search^5
    author_8xx_search
  </str>

  <str name="pf_author">
    author_1xx_unstem_search^5000
    author_7xx_unstem_search^3000
    author_1xx_search^500
    author_7xx_search^300
    author_8xx_unstem_search^250
    author_8xx_search^200
  </str>

  <!-- for user query terms in title text box -->
  <str name="qf_title">
    title_245a_unstem_search^50000
    title_245a_unstem_search^25000
    title_uniform_unstem_search^10000
    title_245a_search^5000
    title_245_search^1000
    title_uniform_search^250
    title_variant_unstem_search^150
  </str>
</requestHandler>
<requestHandler name="advanced" class="solr.SearchHandler">
  <lst name="default">
    <str name="defType">lucene</str>
    <str name="echoParams">explicit</str>
    <str name="rows">20</str>
    <str name="df">all_search</str>
    <str name="q.op">AND</str>
    <str name="qs">1</str>
    <str name="sort">score desc, pub_date_sort desc, title_sort asc</str>
  </lst>

  <!-- used for dismax query parser -->
  <str name="mm">1</str>
  <str name="ps">3</str>
  <float name="tie">0.01</float>
  <!-- for user query terms in author text box -->
  <str name="qf_author">
    author_1xx_unstem_search^200
    author_7xx_unstem_search^50
  </str>
</requestHandler>
Query Term Transformations

**AND**
When AND is in user query, add a required symbol (“+”) to the preceding and following terms and remove the AND:

- vladimir AND nabokov → +vladimir +nabokov
- tom AND lynn AND jessie → +tom +lynn +jessie
- (dog cat) AND mouse → +(dog +cat) +mouse
- (dog AND cat) AND mouse → +(dog +cat) +mouse
- ((dog cat) AND (mouse bug)) house → +(dog +cat) +(mouse +bug) +house
- ((dog AND cat) (mouse AND bug)) house → +(dog +cat) +(mouse +bug) +house
- ((dog cat) (mouse bug)) AND house → +(dog +cat) +(mouse +bug) +house

**Plain**
The default operator is AND, so lack of a Boolean operator implies AND. When a term has no preceding NOT, AND or OR, and has no following AND or OR, add a required symbol (“+”):

- vladimir nabokov → +vladimir +nabokov
- black and tan → +black +and +tan
OR
OR can be left alone.

\[
\text{nabokov OR pushkin} \rightarrow \text{nabokov OR pushkin} \\
\text{(tom lynn) OR Jessie} \rightarrow \text{(tom lynn) OR Jessie}
\]

NOT
When there is a \textit{single term} for the user query in a text box, and it is preceded by NOT, NOT will move in front of the \_query\_ piece.

\[
\text{NOT cat} \rightarrow q=\text{NOT } \_query\_ : "\{dismax \textit{qf=stuff pf=stuff}\}cat" \\
\text{NOT (dog OR cat)} \rightarrow q=\text{NOT } \_query\_ : "\{dismax \textit{qf=stuff pf=stuff}\}(\text{dog OR cat})" \\
\text{NOT (dog AND cat)} \rightarrow q=\text{NOT } \_query\_ : "\{dismax \textit{qf=stuff pf=stuff}\}(+\text{dog +cat})"
\]

When there are \textit{multiple terms} in a text box and one or more is preceded by NOT, the NOT should be left alone.

\[
\text{cat NOT mouse} \rightarrow +\text{cat NOT mouse} \\
\text{NOT mouse cat} \rightarrow \text{NOT mouse +cat} \\
\text{cat AND NOT mouse} \rightarrow +\text{cat NOT mouse} \\
\text{NOT mouse AND cat} \rightarrow \text{NOT mouse +cat}
\]
**Single Term**

A single term in a search box, *without any operator*, may be left alone:

```
fred  →  fred
```

A single term can be a parenthetical phrase:

```
(joe OR fred)  →  (joe OR fred)
((dog cat) AND (mouse bug))  →  (+(+dog +cat) +(+mouse +bug))
```

**NOT** blah  →  this is *not* treated as a single term, because of the “NOT” See above.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Lucene</th>
<th>Dismax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boolean</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Each Text Box -&gt; Multiple Index Fields</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Each Text Box -&gt; Complex Boosting Equation</td>
<td>yuck</td>
<td>✓</td>
</tr>
<tr>
<td>Multiple Text Boxes</td>
<td>yuck</td>
<td>✓</td>
</tr>
<tr>
<td>Multiple Query Words Match Across Fields</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Boosting Matches Simple “Author” “Title” “Subject” Searches</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
fq=format:(Book OR Video)
Challenges in Implementing Advanced Search

- Multi-select facets
  - Make the user easily aware of the current facet selections
- Integration with current UI
  - Faceting
  - Search Breadcrumbs
Multi-select Facets

AND have these attributes:

- **Access**
  - At the Library (5,653,662)
  - Online (774,780)

- **Format**
  - Book (5,488,052)
  - Computer File (3,491)
  - Conference Proceedings (185,570)
  - Image (3,046)
  - Journal/Periodical (287,058)
  - Manuscript/Archive (12,199)
  - Map/Globe (56,674)
  - Microformat (267,698)
  - Music - Recording (71,913)
  - Music - Score (80,898)
  - Newspaper (5,068)
  - Other (83,425)
  - Sound Recording (3,379)
  - Thesis (106,923)
  - Video (43,069)

- **Language**
- **Call Number**
- **Location**

AND have these attributes:

- **Access** = (At the Library)
  - At the Library (5,653,662)
  - Online (774,780)

- **Format** = (Book OR Conference Proceedings OR Journal/Periodical OR Microformat OR Video)

- **Language** = (Aramaic OR Armenian OR English OR Icelandic OR Sanskrit)

- **Call Number** = (A - General Works OR D - World History OR K - Law OR Q - Science OR T - Technology)

- **Location** = (Art & Architecture OR East Asia OR Hoover Archives OR Special Collections & Archives)
  - Archive of Recorded Sound (40,257)
  - Art & Architecture (128,881)
  - Branner (Earth Sciences & Maps) (138,531)
  - Classics (5,408)
  - Crown (Law) (244,445)
  - Cubberley (Education) (62,812)
  - East Asia (320,339)
  - Engineering (27,192)
  - Falconer (Biology) (35,843)
  - Green (Humanities & Social Sciences) (2,304,837)
  - Hoover Archives (6,947)
Actionable facets in search results

Advanced Search: Author = (Rowling)  
Limited to: Format = Video OR Book

Refine your search

Access
- At the Library (51)
- Online (7)

Format
- Book (49) [remove]
- Video (9) [remove]
- Thesis (2)
- Conference Proceedings (1)

1. The folklore of the Lake District
   - Author/Creator: Rowling, Marjorie.
   - Published: 1976
   - At the Library: Green » Stacks »
   - Format: Book

2. Everyday life in medieval times
   - Author/Creator: Rowling, Marjorie.
Actionable facets in search results

Advanced Search: Author = (Rowling)
Limited to: Format = Video OR Book AND Thesis
Integration with current UI

- Remove links for facets only in refine column
  - Constraints area gets too cluttered with that many potential remove links
- You remove entire search fields not individual words from constraints
  - This too reduces clutter
Advanced Search in Blacklight

- Separate installable plugin
- 1 configuration file
- Configuration file does 2 things
  - Generates the advanced search form
  - Maps settings in request handler for query parser

```ruby
Blacklight::AdvancedSearch.configure(:shared) do |config|
  config[:advanced] = {
    :qt => "advanced_search",
    :fields => ["author", "title", "subject", "keyword", "numbers"],
    # Author
    :author => {
      :pf => "pf_author",
      :qf => "qf_author"
    },
    # Title
    :title => {
      :pf => "pf_title",
      :qf => "qf_title"
    },
    # Subject
    :subject => {
      :pf => "pf_subject",
      :qf => "qf_subject"
    },
    # Keyword (metadata)
    :keyword => {
      :pf => "pf_keyword",
      :qf => "qf_keyword"
    },
    # Number
    :numbers => {
      :qf => "qf_number"
    }
  }
end
```
“Huzzah!”