

Relais D2D and alternate discovery interfaces

Updated: April 18, 2011

If using a discovery interface other than that provided through Relais D2D, as the starting point for searching, it is possible to direct users to D2D to take advantage of the Check Availability, Load Balancing and Requesting options offered in D2D.

To take advantage of this option it is necessary for your discovery interface to generate an OpenURL which includes a query with appropriate search terms.

This OpenURL displays the results page in Relais D2D at which point the user can select the title of interest. D2D completes Check Availability and the user can submit the request as appropriate.

Generating the OpenURL

The basic structure for the OpenURL is:

<http://www.customer service name.relaisd2d.com/service-proxy/?command=bdauth&LS=library symbol&PI=patron id&query=#{complex query}>

Where:

- **customer service name** is part of the base url for your Relais D2D system, e.g., www.demo.relaisd2d.com
- **library symbol** is the symbol with which your library is registered in your Relais D2D system, e.g., BROWN
- **patron id** is the unique id for the user, e.g., 12345
- **complex query** is the query to use in Relais D2D to retrieve the user's item of interest. See more details below about how to form the complex query.

Generating the Complex Query

There are six types of search terms that can be used in the query. The following table lists the types of terms allowed and the corresponding tags.

Type of Search Term	Tag
Title	ti
Author	au
Subjects(s)	su

ISBN	isbn
ISSN	issn

The OpenURL must be built using ASCII, so if appropriate be sure to add the appropriate ESC codes. For example if the source of the OpenURL is UTF-8 then ESC codes must be added:

Character	ESC code
Quotation mark	%22
Space	%20
Equals sign	%3d

See [Encoding Uniform Resource Locators](#) for more details on coding special characters when forming the URL.

Example 1. ISBN

OpenURL with query: ISBN = "9780873389235"

<http://www.demo.relaisd2d.com/service-proxy/?command=bdauth&LS=BROWN&PI=28&query=isbn%3D%229780873389235%22>

The screenshot shows a web browser window with the URL www.demo.relaisd2d.com/search.html?query=isbn%3D%229780873389235%22. The page header includes the Relais International logo and a search bar containing the query `isbn="9780873389235"`. Navigation links for Help, Advanced Search, My account, and a user profile (Hello, Brown Library User) are visible. The search results section shows a single hit for the book *A sea of change* by Ernest Hemingway and the Gulf Stream, contextual biography by Ott, Mark P. (2008). The source information lists several libraries: DARTMOUTH (1), YALE (1), COLUMBIA (1), PENN (1), CORNELL (1), and PRINCETON (1). The subject is listed as Hemingway, Ernest and Nature in literature.

Example 2. ISSN

OpenURL with query: ISSN = "14803291"

<http://www.demo.relaisd2d.com/service-proxy/?command=bdauth&LS=BROWN&PI=28&query=issn%3D%2214803291%22>

Relais D2D Demo Search S... x

www.demo.relaisd2d.com/search.html?query=issn%3D"14803291"

EasyWeb Ottawa Citizen | Late... Welcome to Facebook Google Groups Weather Forecast: O... Visit France by Bike acrl 2011 - Google Se... Other bookmarks

relais INTERNATIONAL

issn="14803291" Search!

Help | [Advanced Search](#) | [My account](#) | Hello, Brown Library User ([logout](#))

Source: All Query: issn="14803291" Completed. Showing 1 - 1 of 2 hits

Sort by [relevance](#) and show [20](#) results per page

Prev 1 Next

<p>Canadian journal of chemistry 1951 (journal (electronic))</p> <p>Held by: DARTMOUTH, BROWN</p>	<p>Source</p> <p>BROWN (1)</p> <p>DARTMOUTH (1)</p> <p>More...</p> <p>Subject</p> <p>Chemistry</p>
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Example 3. Title.

OpenURL with query: title = "the old man and the sea"

<http://www.demo.relaisd2d.com/service-proxy/?command=bdauth&LS=BROWN&PI=28&query=ti%3D%22the%20old%20man%20and%20the%20sea%22>

Relais D2D Demo Search S... x

www.demo.relaisd2d.com/search.html?query=ti%3D"the+old+man+and+the+sea"

EasyWeb Ottawa Citizen | Late... Welcome to Facebook Google Groups Weather Forecast: O... Visit France by Bike acrl 2011 - Google Se... Other bookmarks

relais INTERNATIONAL

ti="the old man and the sea" Search!

Help | [Advanced Search](#) | [My account](#) | Hello, Brown Library User ([logout](#))

Source: All Query: ti="the old man and the sea" Completed. Showing 1 - 20 of 538 hits

Sort by [relevance](#) and show [20](#) results per page

Prev 1 2 3 4 5 6 7 ... Next

<p>"The old man and the sea" by Hemingway, Ernest 1952 (book)</p> <p>Held by: PRINCETON, COLUMBIA, CORNELL, CRL, YALE, DARTMOUTH</p>	<p>Source</p> <p>BROWN (296)</p> <p>HARVARD (167)</p> <p>DARTMOUTH (27)</p> <p>CORNELL (14)</p> <p>COLUMBIA (13)</p> <p>YALE (12)</p> <p>PRINCETON (7)</p> <p>CRL (2)</p> <p>More...</p> <p>Subject</p> <p>Hemingway, Ernest</p> <p>Popular music</p> <p>Music</p> <p>Fishers</p> <p>Older men</p> <p>Cuba</p> <p>Friendship</p> <p>Feature films</p> <p>Sea songs</p> <p>Jazz</p> <p>Folk songs - English</p>
<p>The old man and the sea - story of a common man by Brenner, Gerry 1991 (book)</p> <p>Held by: PRINCETON, COLUMBIA, CORNELL, YALE, DARTMOUTH</p>	
<p>Twentieth century interpretations of The old man and the sea ; - a collection of critical essays by Jobes, Katharine T 1968 (book)</p> <p>Held by: PRINCETON, COLUMBIA, CORNELL, YALE</p>	
<p>The old man and the sea Warner Bros. Pictures ; directed by John Sturges ; produced by Leland Hayward ; screenplay by Peter Viertel ; a Leland Hayward Production ; a Warner Bros. presentation 2000 (video)</p> <p>Held by: CORNELL, YALE</p>	
<p>The old man and the sea Warner Bros. Pictures ; directed by John Sturges ; produced by Leland Hayward ; screenplay by Peter Viertel ; a Leland Hayward Production ; a Warner Bros. presentation 2000 (video-dvd)</p> <p>Held by: COLUMBIA, DARTMOUTH</p>	
<p>The old man and the sea by Hemingway, Ernest 1990 (book)</p> <p>Held by: PRINCETON</p>	
<p>The old man and the sea by Hemingway, Ernest 1980 (book)</p> <p>Held by: COLUMBIA, CORNELL</p>	
<p>Ernest Hemingway's The old man and the sea edited with an introduction by Harold Bloom 2008 (book)</p> <p>Held by: COLUMBIA, DARTMOUTH</p>	

Example 4. Title and author keywords.

OpenURL with query: title keyword = "sea" and author keyword = "hemingway"

<http://www.demo.relaisd2d.com/service-proxy/?command=bdauth&LS=BROWN&PI=28&query=ti%3D%22sea%22%20and%20au%3D%22hemingway%22>

The screenshot shows a web browser window displaying the Relais International search results page. The browser's address bar shows the URL: www.demo.relaisd2d.com/search.html?query=ti%3D%22sea%22%20and%20au%3D%22hemingway%22. The page header includes the Relais International logo and a search bar containing the query "sea" and au="hemingway". Navigation links for "Help", "Advanced Search", "My account", and "Hello, Brown Library User (logout)" are visible.

The search results section displays the following information:

- Source:** All **Query:** ti="sea" and au="hemingway"
- Showing 1 - 20 of 91 hits
- Sort by: relevance and show 20 results per page

The results list includes the following items:

- "The old man and the sea" by Hemingway, Ernest** 1952 (book)
Held by: COLUMBIA, CORNELL, PRINCETON, CRL, YALE
- Ernest Hemingway** - Rivers to the sea written and directed by DeWitt Sage; producers DeWitt Sage, Catherine Brown Collins, Allyson Luchak and Jenny Carchman; produced by Thirteen WNET New York and Maha Films 2005 (video-dvd)
Held by: COLUMBIA, CORNELL, YALE
- Notes from a sea diary** - Hemingway all the way by Algren, Nelson 1965 (book)
Held by: COLUMBIA, PRINCETON, BROWN, DARTMOUTH
- A sea of change** - Ernest Hemingway and the Gulf Stream : a contextual biography by Ott, Mark P 2008 (book)
Held by: COLUMBIA, PRINCETON, DARTMOUTH
- The old man and the sea by Hemingway, Ernest** 1980 (book)
Held by: HARVARD, COLUMBIA, CORNELL
- The old man and the sea** Warner Bros. Pictures; directed by John Sturges; produced by Leland Hayward; screenplay by Peter Viertel; a Leland Hayward Production; a Warner Bros. presentation 2000 (video)
Held by: CORNELL, YALE
- Stories of the sea** edited by Diana Secker Tesdell 2010 (book)
Held by: PRINCETON
- The old man and the sea by Hemingway, Ernest** 1990 (book)
Held by: PRINCETON
- The Oxford book of sea stories** selected by Tony Tanner 1994 (book)
Held by: COLUMBIA
- The old man and the sea** - story of a common man by Brenner, Gerry 1991 (book)
Held by: COLUMBIA, PRINCETON

On the right side of the page, there are two sections:

- Source:** HARVARD (29), COLUMBIA (18), YALE (10), CORNELL (10), PRINCETON (10), BROWN (8), DARTMOUTH (3), CRL (3). A "More..." link is provided.
- Subject:** Hemingway, Ernest, Fishers, Older men, Friendship, Cuba, Feature films, Video recordings for the hearing impaired, Allegories, H. D., American literature, Nature in literature, Bildungsromane, Masculinity in literature, Women in literature, Sex role in literature.

Encoding Uniform Resource Locators

Uniform Resource Locators (URL), limits the use of allowed characters to only a limited subset of the US-ASCII character set. As specified in RFC 1738 (<http://www.rfc-editor.org/rfc/rfc1738.txt>) Page 3, paragraph 3:

"...Only alphanumerics [0-9a-zA-Z], the special characters "\$-_.+!*'()," [not including the quotes - ed], and reserved characters used for their reserved purposes may be used unencoded within a URL."

World Wide Web Consortium is working on a draft to support Unicode in URL. Presently most DNS servers can understand only US-ASCII.

Support for non standard characters in URL is limited to 0 – 255 ASCII code representation.

0 – 127 ASCII

128 – 255 Extended ASCII (Should always be encoded in URL)

To encode non standard ASCII code: take the hexadecimal value of the ASCII code and prefix %.

Example: Space (\s) – ASCII Code: 32; Hex: 20; URL ESC: %20.

HTML CODED CHAR	CHAR	DESCRIPTION	URL ESC
�-		Unused	
		\t	Horizontal tab	%9

	\n	Line feed	%a
-		Unused	
	\r	Carriage Return	%d
-		Unused	
 	\s	Space	%20
!	!	Exclamation mark	%21
"	"	Quotation mark	%22
#	#	Number sign	%23
$	\$	Dollar sign	%24
%	%	Percent sign	%25
&(&#39;)	&	Ampersand	%26
'	'	Apostrophe	%27
((Left parenthesis	%28
))	Right parenthesis	%29
*	*	Asterisk	%2a
+	+	Plus sign	%2b
,	,	Comma	%2c

-	-	Hyphen	%2d
.	.	Period (fullstop)	%2e
/	/	Solidus (slash)	%2f
0-9	0-9	Digits 0-9	
:	:	Colon	%3a
;	;	Semi-colon	%3b
<(<)	<	Less than	%3c
=	=	Equals sign	%3d
>(>)	>	Greater than	%3e
?	?	Question mark	%3f
@	@	Commercial at	%40
A-Z	A-Z	Letters A-Z	
[[Left square bracket	%5b
\	\	Reverse solidus (backslash)	%5c
]]	Right square bracket	%5d
^	^	Caret	%5e
_	_	Horizontal bar (underscore)	%5f
`	`	Acute accent	%60
a-z	a-z	Letters a-z	
{	{	Left curly brace	%7b
|		Vertical bar	%7c
}	}	Right curly brace	%7d
~	~	Tilde	%7e
-Ÿ		Unused	
 ()	\s(nb)	Non-breaking Space	%a0
¡	¡	Inverted exclamation	%a1
¢	¢	Cent sign	%a2
£	£	Pound sterling	%a3
¤	¤	General currency sign	%a4
¥	¥	Yen sign	%a5
¦	¦	Broken vertical bar	%a6
§	§	Section sign	%a7
¨	¨	Umlaut (dieresis)	%a8
©(©)	©	Copyright	%a9
ª	ª	Feminine ordinal	%aa
«	«	Left angle quote, guillemotleft	%ab
¬	¬	Not sign	%ac
­	-	Soft hyphen	%ad
®	®	Registered trademark	%ae
¯	ˉ	Macron accent	%af

°	°	Degree sign	%b0
±	±	Plus or minus	%b1
²	²	Superscript two	%b2
³	³	Superscript three	%b3
´	´	Acute accent	%b4
µ	μ	Micro sign	%b5
¶	¶	Paragraph sign	%b6
·	•	Middle dot	%b7
¸	¸	Cedilla	%b8
¹	¹	Superscript one	%b9
º	º	Masculine ordinal	%ba
»	»	Right angle quote, guillemotright	%bb
¼(¼)	¼	Fraction one-fourth	%bc
½(½)	½	Fraction one-half	%bd
¾(¾)	¾	Fraction three-fourths	%be
¿	¿	Inverted question mark	%bf
À	À	Capital A, grave accent	%c0
Á	Á	Capital A, acute accent	%c1
Â	Â	Capital A, circumflex accent	%c2
Ã	Ã	Capital A, tilde	%c3
Ä	Ä	Capital A, dieresis or umlaut mark	%c4
Å	Å	Capital A, ring	%c5
Æ	Æ	Capital AE diphthong (ligature)	%c6
Ç	Ç	Capital C, cedilla	%c7
È	È	Capital E, grave accent	%c8
É	É	Capital E, acute accent	%c9
Ê	Ê	Capital E, circumflex accent	%ca
Ë	Ë	Capital E, dieresis or umlaut mark	%cb
Ì	Ì	Capital I, grave accent	%cc
Í	Í	Capital I, acute accent	%cd
Î	Î	Capital I, circumflex accent	%ce
Ï	Ï	Capital I, dieresis or umlaut mark	%cf
Ð	Ð	Capital Eth, Icelandic	%d0
Ñ	Ñ	Capital N, tilde	%d1
Ò	Ò	Capital O, grave accent	%d2
Ó	Ó	Capital O, acute accent	%d3
Ô	Ô	Capital O, circumflex accent	%d4
Õ	Õ	Capital O, tilde	%d5
Ö	Ö	Capital O, dieresis or umlaut mark	%d6
×	×	Multiply sign	%d7

Ø	Ø	Capital O, slash	%d8
Ù	Ù	Capital U, grave accent	%d9
Ú	Ú	Capital U, acute accent	%da
Û	Û	Capital U, circumflex accent	%db
Ü	Ü	Capital U, dieresis or umlaut mark	%dc
Ý	Ý	Capital Y, acute accent	%dd
Þ	Þ	Capital THORN, Icelandic	%de
ß	ß	Small sharp s, German (sz ligature)	%df
à	à	Small a, grave accent	%e0
á	á	Small a, acute accent	%e1
â	â	Small a, circumflex accent	%e2
ã	ã	Small a, tilde	%e3
ä	ä	Small a, dieresis or umlaut mark	%e4
å	å	Small a, ring	%e5
æ	æ	Small ae diphthong (ligature)	%e6
ç	ç	Small c, cedilla	%e7
è	è	Small e, grave accent	%e8
é	é	Small e, acute accent	%e9
ê	ê	Small e, circumflex accent	%ea
ë	ë	Small e, dieresis or umlaut mark	%eb
ì	ì	Small i, grave accent	%ec
í	í	Small i, acute accent	%ed
î	î	Small i, circumflex accent	%ee
ï	ï	Small i, dieresis or umlaut mark	%ef
ð	ð	Small eth, Icelandic	%f0
ñ	ñ	Small n, tilde	%f1
ò	ò	Small o, grave accent	%f2
ó	ó	Small o, acute accent	%f3
ô	ô	Small o, circumflex accent	%f4
õ	õ	Small o, tilde	%f5
ö	ö	Small o, dieresis or umlaut mark	%f6
÷	÷	Division sign	%f7
ø	ø	Small o, slash	%f8
ù	ù	Small u, grave accent	%f9
ú	ú	Small u, acute accent	%fa
û	û	Small u, circumflex accent	%fb
ü	ü	Small u, dieresis or umlaut mark	%fc
ý	ý	Small y, acute accent	%fd
þ	þ	Small thorn, Icelandic	%fe
ÿ	ÿ	Small y, dieresis or umlaut mark	%ff