



searchRetrieve: Part 0. Overview Version 1.0

OASIS Standard

30 January 2013

Specification URIs

This version:

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part0-overview/searchRetrieve-v1.0-os-part0-overview.doc> (Authoritative)
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part0-overview/searchRetrieve-v1.0-os-part0-overview.html>
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part0-overview/searchRetrieve-v1.0-os-part0-overview.pdf>

Previous version:

N/A

Latest version:

<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/searchRetrieve-v1.0-part0-overview.doc> (Authoritative)
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/searchRetrieve-v1.0-part0-overview.html>
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/searchRetrieve-v1.0-part0-overview.pdf>

Technical Committee:

OASIS Search Web Services TC

Chairs:

Ray Denenberg (rden@loc.gov), Library of Congress
Matthew Dovey (m.dovey@jisc.ac.uk), JISC Executive, University of Bristol

Editors:

Ray Denenberg (rden@loc.gov), Library of Congress
Larry Dixon (ldix@loc.gov), Library of Congress
Ralph Levan (levan@oclc.org), OCLC
Janifer Gatenby (Janifer.Gatenby@oclc.org), OCLC
Tony Hammond (t.hammond@nature.com), Nature Publishing Group
Matthew Dovey (m.dovey@jisc.ac.uk), JISC Executive, University of Bristol

Additional artifacts:

This prose specification is one component of a Work Product which also includes:

- XML schemas: <http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/schemas/>
- *searchRetrieve: Part 0. Overview Version 1.0.* (this document)
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part0-overview/searchRetrieve-v1.0-os-part0-overview.html>
- *searchRetrieve: Part 1. Abstract Protocol Definition Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part1-apd/searchRetrieve-v1.0-os-part1-apd.html>
- *searchRetrieve: Part 2. searchRetrieve Operation: APD Binding for SRU 1.2 Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part2-sru1.2/searchRetrieve-v1.0-os-part2-sru1.2.html>

- *searchRetrieve: Part 3. searchRetrieve Operation: APD Binding for SRU 2.0 Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part3-sru2.0/searchRetrieve-v1.0-os-part3-sru2.0.html>
- *searchRetrieve: Part 4. APD Binding for OpenSearch Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part4-opensearch/searchRetrieve-v1.0-os-part4-opensearch.html>
- *searchRetrieve: Part 5. CQL: The Contextual Query Language Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part5-cql/searchRetrieve-v1.0-os-part5-cql.html>
- *searchRetrieve: Part 6. SRU Scan Operation Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part6-scan/searchRetrieve-v1.0-os-part6-scan.html>
- *searchRetrieve: Part 7. SRU Explain Operation Version 1.0.*
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part7-explain/searchRetrieve-v1.0-os-part7-explain.html>

Related work:

This specification is related to:

- Search/Retrieval via URL. The Library of Congress. <http://www.loc.gov/standards/sru/>
- Scan Operation. Library of Congress. <http://www.loc.gov/standards/sru/specs/scan.html>
- Explain Operation. Library of Congress. <http://www.loc.gov/standards/sru/specs/explain.html>
- OpenSearch » 1.1 » Draft 5 specification.
http://www.opensearch.org/Specifications/OpenSearch/1.1/Draft_5

Declared XML namespaces:

- <http://docs.oasis-open.org/ns/search-ws/agnostic>
- <http://docs.oasis-open.org/ns/search-ws/facetedResults>
- <http://docs.oasis-open.org/ns/search-ws/scan>
- <http://docs.oasis-open.org/ns/search-ws/searchResultAnalysis>
- <http://docs.oasis-open.org/ns/search-ws/soap>
- <http://docs.oasis-open.org/ns/search-ws/sruRequest>
- <http://docs.oasis-open.org/ns/search-ws/sruResponse>
- <http://docs.oasis-open.org/ns/search-ws/xcql>

Abstract:

This is one of a set of documents for the OASIS Search Web Services (SWS) initiative. This document is the Overview and serves to introduce the full collection of documents.

Status:

This document was last revised or approved by the membership of OASIS on the above date. The level of approval is also listed above. Check the "Latest version" location noted above for possible later revisions of this document.

Technical Committee members should send comments on this specification to the Technical Committee's email list. Others should send comments to the Technical Committee by using the "Send A Comment" button on the Technical Committee's web page at <http://www.oasis-open.org/committees/search-ws/>.

For information on whether any patents have been disclosed that may be essential to implementing this specification, and any offers of patent licensing terms, please refer to the Intellectual Property Rights section of the Technical Committee web page (<http://www.oasis-open.org/committees/search-ws/ipr.php>).

Citation format:

When referencing this specification the following citation format should be used:

[SearchRetrievePt0]

searchRetrieve: Part 0. Overview Version 1.0. 30 January 2013. OASIS Standard.
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/os/part0-overview/searchRetrieve-v1.0-os-part0-overview.html>.

Notices

Copyright © OASIS Open 2013. All Rights Reserved.

All capitalized terms in the following text have the meanings assigned to them in the OASIS Intellectual Property Rights Policy (the "OASIS IPR Policy"). The full [Policy](#) may be found at the OASIS website.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published, and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this section are included on all such copies and derivative works. However, this document itself may not be modified in any way, including by removing the copyright notice or references to OASIS, except as needed for the purpose of developing any document or deliverable produced by an OASIS Technical Committee (in which case the rules applicable to copyrights, as set forth in the OASIS IPR Policy, must be followed) or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by OASIS or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and OASIS DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY OWNERSHIP RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

OASIS requests that any OASIS Party or any other party that believes it has patent claims that would necessarily be infringed by implementations of this OASIS Committee Specification or OASIS Standard, to notify OASIS TC Administrator and provide an indication of its willingness to grant patent licenses to such patent claims in a manner consistent with the IPR Mode of the OASIS Technical Committee that produced this specification.

OASIS invites any party to contact the OASIS TC Administrator if it is aware of a claim of ownership of any patent claims that would necessarily be infringed by implementations of this specification by a patent holder that is not willing to provide a license to such patent claims in a manner consistent with the IPR Mode of the OASIS Technical Committee that produced this specification. OASIS may include such claims on its website, but disclaims any obligation to do so.

OASIS takes no position regarding the validity or scope of any intellectual property or other rights that might be claimed to pertain to the implementation or use of the technology described in this document or the extent to which any license under such rights might or might not be available; neither does it represent that it has made any effort to identify any such rights. Information on OASIS' procedures with respect to rights in any document or deliverable produced by an OASIS Technical Committee can be found on the OASIS website. Copies of claims of rights made available for publication and any assurances of licenses to be made available, or the result of an attempt made to obtain a general license or permission for the use of such proprietary rights by implementers or users of this OASIS Committee Specification or OASIS Standard, can be obtained from the OASIS TC Administrator. OASIS makes no representation that any information or list of intellectual property rights will at any time be complete, or that any claims in such list are, in fact, Essential Claims.

The name "OASIS" is a trademark of [OASIS](#), the owner and developer of this specification, and should be used only to refer to the organization and its official outputs. OASIS welcomes reference to, and implementation and use of, specifications, while reserving the right to enforce its marks against misleading uses. Please see <http://www.oasis-open.org/policies-guidelines/trademark> for above guidance.

Table of Contents

1	Introduction	5
1.1	Terminology	5
1.2	Normative References	5
1.3	Namespace	6
1.4	Schemas	6
2	Rationale	8
3	SWS documents: Roles and Relationships	9
3.1	Abstract Protocol Definition	9
3.2	OpenSearch	9
3.3	SRU	9
3.3.1	SRU1.2	9
3.3.2	SRU2.0	10
3.4	Other protocols and bindings	10
Appendix A.	Acknowledgements	11

1 Introduction

This is one of a set of documents for the OASIS Search Web Services (SWS) initiative.

This document is the Overview and serves to introduce the full collection of documents.

The documents in the collection of specifications are:

1. Overview
2. APD
3. SRU1.2
4. SRU2.0
5. OpenSearch
6. CQL
7. Scan
8. Explain

1.1 Terminology

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

1.2 Normative References

The following list of references applies to all of the documents in this collection.

- **RFC2119**
Key words for use in RFCs to Indicate Requirement Levels, IETF RFC 2119, March 1997
<http://www.ietf.org/rfc/rfc2119.txt>
- **Overview**
searchRetrieve: Part 0. Overview Version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part0-overview/searchRetrieve-v1.0-csd01-part0-overview.doc>
- **APD**
searchRetrieve: Part 1. Abstract Protocol Definition Version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part1-apd/searchRetrieve-v1.0-csd01-part1-apd.doc>
- **SRU1.2**
searchRetrieve: Part 2. SRU searchRetrieve Operation: APD Binding for SRU 1.2 Version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part2-sru1.2/searchRetrieve-v1.0-csd01-part2-sru1.2.doc>
- **SRU2.0**
searchRetrieve: Part 3. SRU searchRetrieve Operation: APD Binding for SRU 2.0 Version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part3-sru2.0/searchRetrieve-v1.0-csd01-part3-sru2.0.doc>
- **OpenSearch**
searchRetrieve: Part 4. APD Binding for OpenSearch 1.0 version 1.0
<http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part4-openSearch1.0/searchRetrieve-v1.0-csd01-part4-openSearch.doc>
- **CQL**
searchRetrieve: Part 5. CQL: The Contextual Query Language version 1.0

- 44 <http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part5-cql/searchRetrieve-v1.0-csd01-part5-cql.doc>
- 45
- 46 • **Scan**
- 47 *searchRetrieve: Part 6. SRU Scan Operation version 1.0*
- 48 <http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part6-scan/searchRetrieve-v1.0-csd01-part6-scan.doc>
- 49
- 50 • **Explain**
- 51 *searchRetrieve: Part 7. SRU Explain Operation version 1.0*
- 52 <http://docs.oasis-open.org/search-ws/searchRetrieve/v1.0/csd01/part7-explain/searchRetrieve-v1.0-csd01-part7-explain.doc>
- 53
- 54 • **MODS**
- 55 *Metadata Object Description Schema: MODS (Library of Congress)*
- 56 <http://www.loc.gov/standards/mods/>

57 1.3 Namespaces

58 **XML namespaces used in this standard, and their prefixes:**

Prefix	Namespace
sruRequest	http://docs.oasis-open.org/ns/search-ws/sruRequest
diag	http://docs.oasis-open.org/ns/search-ws/diagnostic
facet	http://docs.oasis-open.org/ns/search-ws/facetedResults
scan	http://docs.oasis-open.org/ns/search-ws/scan
sra	http://docs.oasis-open.org/ns/search-ws/searchResultAnalysis
sruResponse	http://docs.oasis-open.org/ns/search-ws/sruResponse
xcql	http://docs.oasis-open.org/ns/search-ws/xcql
sru-soap	http://docs.oasis-open.org/ns/search-ws/soap

59 1.4 Schemas

60 **XML Schemas used in this standard:**

	Schema	Used for	URL
1	SRU	The default format for an SRU response.	/schemas/sruResponse.xsd
2	Diagnostics	The format for presentation of a diagnostic within an SRU or Scan response.	/schemas/diagnostic.xsd
3	Explain	Explain for SRU 2.0.	/schemas/explain.xsd
4	Faceted Search Results	The format for presentation of faceted results within an SRU 2.0 response.	/schemas/ facetedResults.xsd
5	Search Result Analysis	The format for presentation of search result analysis within an SRU 2.0 response.	/schemas/ searchResultAnalysis.xsd

6	XCQL	CQL expressed in XML, used to echo a query in a search/retrieve response. It is not used in search/retrieve requests.	/schemas/xcql.xsd
7	Scan	The format for a Scan response.	/schemas/scan.xsd
8	SOAP Support	Used for the SRU binding to SOAP.	/schemas/sru-wsdl11.wsdl and /schemas/sruRequest.xsd

61

62 2 Rationale

63 The OASIS Search Web Services (SWS) initiative defines a generic protocol for the interaction required
64 between a client and server for performing searches. SWS defines an Abstract Protocol Definition (APD
65 searchRetrieve Part 1) to describe this interaction. All search protocols can be regarded as concrete
66 implementations of this definition. The Abstract Protocol Definition facilitates interoperability between
67 different search protocols by providing a common framework and terminology for describing search
68 protocols.

69 The APD is a simplification and revision of the abstract model for search and retrieval contained within
70 the NISO Z39.50 standard.

71 The APD defines the following abstract models:

72

73 1. **Data Model** – an abstract model describing the data upon which the search is to be performed

74 2. **Query Model** – an abstract model describing how the search query is constructed

75 3. **Processing Model** – an abstract model describing how the query is sent from the client to the
76 server

77 4. **Result Set Model** – an abstract model describing the structure for the results returned by the
78 search

79 5. **Diagnostics Model** – an abstract model for how errors are communicated by the server to the
80 client

81 6. **Description and Discovery Model** – an abstract model for how the search service may be
82 discovered and to enable self-description of the functionality of the service

83

84 The **Processing Model** presumes a client-server model where the client and server communicate via a
85 searchRetrieve protocol which incorporates a query language. In this model a client sends a
86 searchRetrieve request to a server, which processes the request and responds with a searchRetrieve
87 request. The APD defines abstract request parameters and abstract response elements. Part of the
88 request parameters include a search query as defined in the **Query Model**. Part of the response
89 parameters include the results generated from the **Data Model** and represented in the response
90 according to the **Result Set Model**. The Response may also include error handling information according
91 to the **Diagnostics Model**. In addition, a client may query the capabilities of the server via the
92 **Description and Discovery Model** (in terms of available data sets which can be queried, available
93 **Result Set Models** in cases where a server supports multiple formats for returning results, available
94 query languages where a server support multiple **Query Models** etc.)

95

96 The APD serves as a guideline for the development of *application protocol bindings*. A binding indicates
97 the corresponding actual names of the parameters and elements to be transmitted in a request or
98 response. The SWS document collection includes bindings for SRU1.2, SRU2.0 and OpenSearch

99

100

101

102

103 3 SWS documents: Roles and Relationships

104 3.1 Abstract Protocol Definition

105 The core of the SWS document collection is the Abstract Protocol Definition (**APD**). The **APD** is described
106 in:

107 **APD**

108 *searchRetrieve: Part 1. Abstract Protocol Definition Version 1.0*

109
110 The remaining documents describe three bindings of the **APD**: SRU1.2, SRU2.0, and OpenSearch.

111 3.2 OpenSearch

112 The **OpenSearch** binding is intended to be fully compatible with
113 http://www.opensearch.org/Specifications/OpenSearch/1.1/Draft_5

114 The **OpenSearch** binding is described in:

115 **OpenSearch**

116 *searchRetrieve: Part 4. APD Binding for OpenSearch 1.0 version 1.0*

117 3.3 SRU

118 **SRU** (*SRU: Search/Retrieve via URL*) is a web service protocol supported over both SOAP and REST for
119 client-server based search. **SRU1.x** was developed as a web service replacement for the NISO Z39.50
120 protocol. **SRU2.0** is a revision to **SRU** which as well as including many enhancements to SRU1.2 was
121 developed alongside the **APD**.

122 For the SRU protocol model, three operations are defined as part of its **Processing Model**:

- 123 1. **SearchRetrieve Operation**. The actual SearchRetrieve operation defined by the SRU protocol; A
124 SearchRetrieve operation consists of a SearchRetrieve request from client to server followed by a
125 SearchRetrieve response from server to client.
- 126 2. **Scan Operation**. Similar to SRU, the Scan protocol defines a request message and a response
127 message for iterating through available search terms. a Scan operation consists of a Scan
128 request followed by a Scan response.
- 129 3. **Explain Operation**. . Every SRU or scan server provides an associated Explain document as
130 part of its **Description and Discovery Model**, providing information about the server's
131 capabilities. A client may retrieve this document and use the information to self-configure and
132 provide an appropriate interface to the user. When a client retrieves an Explain document, this
133 constitutes an Explain operation.

134 3.3.1 SRU1.2

135 The **SRU1.2** binding is the specification of the protocol *SRU: Search/Retrieve via URL*, and is intended to
136 be compatible with the specification at <http://www.loc.gov/standards/sru/specs/>.

137 The base **SRU1.2** binding is defined in:

138 **SRU1.2**

139 *searchRetrieve: Part 2. SRU searchRetrieve Operation: APD Binding for SRU 1.2 Version 1.0*

140 As part of its processing model, **SRU1.2** supported the ability to iterate through search terms using the
141 Scan operation which is defined in:

142 **Scan**

143 *searchRetrieve: Part 6. SRU Scan Operation version 1.0*

144 The **SRU1.2 Query Model** is defined to be the Contextual Query Language and is defined in:

145 **CQL**

146 *searchRetrieve: Part 5. CQL: The Contextual Query Language version 1.0*

147 The **SRU2.0 Discovery and Description Model** is implemented via the Explain Operation which is
148 defined in:

149 **Explain**

150 *searchRetrieve: Part 7. SRU Explain Operation version 1.0*

151 **3.3.2 SRU2.0**

152 **SRU2.0** is a revised specification of the SRU protocol, includes many enhancements to SRU1.2 that
153 SRU developers have requested. The base **SRU2.0** binding is defined in:

154 **SRU2.0**

155 *searchRetrieve: Part 2. SRU searchRetrieve Operation: APD Binding for SRU 1.2 Version 1.0*

156 As part of its processing model, **SRU2.0** supported the ability to iterate through search terms using the
157 Scan operation which is defined in:

158 **Scan**

159 *searchRetrieve: Part 6. SRU Scan Operation version 1.0*

160 The **SRU2.0 Query Model** is defined to be the Contextual Query Language and is defined in:

161 **CQL**

162 *searchRetrieve: Part 5. CQL: The Contextual Query Language version 1.0*

163 The **SRU2.0 Discovery and Description Model** is implemented via the Explain Operation which is
164 defined in:

165 **Explain**

166 *searchRetrieve: Part 7. SRU Explain Operation version 1.0*

167 **3.4 Other protocols and bindings**

168 Other protocols for search can be described in terms of the **APD**.

169 Both the **Explain** and **CQL**, whilst mandatory components of **SRU**, are defined to be usable
170 independently of **SRU** by other protocols and bindings.

171 **Appendix A. Acknowledgements**

172 The following individuals were members of the OASIS SWS TC at the time of publication of this standard:

173
174 Ray Denenberg, Library of Congress
175 Larry Dixon, Library of Congress
176 Ralph LeVan, OCLC
177 Janifer Gatenby, OCLC
178 Tony Hammond, Nature Publishing
179 Matthew Dovey, JISC Executive, University of Bristol