



Electronic Court Filing 4.0 Web Services Service Interaction Profile Version 2.01

**Committee Specification Draft 02 /
Public Review Draft 01**

10 May 2011

Specification URIs:

This version:

<http://docs.oasis-open.org/legalxml-courtfilling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/v2.01/csprd01/ecf-v4.0-webservices-spec-v2.01-csprd01.doc> (Authoritative)
<http://docs.oasis-open.org/legalxml-courtfilling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/v2.01/csprd01/ecf-v4.0-webservices-spec-v2.01-csprd01.html>
<http://docs.oasis-open.org/legalxml-courtfilling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/v2.01/csprd01/ecf-v4.0-webservices-spec-v2.01-csprd01.pdf>

Previous version:

<http://docs.oasis-open.org/legalxml-courtfilling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/ecf-v4.0-webservices-v2.0-spec-cd01.doc> (Authoritative)
<http://docs.oasis-open.org/legalxml-courtfilling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/ecf-v4.0-webservices-v2.0-spec-cd01.html>
<http://docs.oasis-open.org/legalxml-courtfilling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/ecf-v4.0-webservices-v2.0-spec-cd01.pdf>

Latest version:

<http://docs.oasis-open.org/legalxml-courtfilling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/ecf-v4.0-webservices-v2.01-spec.doc> (Authoritative)
<http://docs.oasis-open.org/legalxml-courtfilling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/ecf-v4.0-webservices-v2.01-spec.html>
<http://docs.oasis-open.org/legalxml-courtfilling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/ecf-v4.0-webservices-v2.01-spec.pdf>

Technical Committee:

OASIS LegalXML Electronic Court Filing TC

Chairs:

James Cabral, MTG Management Consultants
Jim Harris, National Center for State Courts

Editor:

Adam Angione, Courthouse News Service

Related work:

This specification replaces or supersedes:

- [Web Services Messaging Profile 1.0 Specification](#)
- [Web Services Service Interaction Profile 1.1 Specification](#)

This specification is related to:

- [Electronic Court Filing Version 4.0](#)

- WSDL documents: [ECF-4.0-WebServicesProfile-Definitions.wsdl](#),
[ECF-4.0-WebServicesProfile-ImplementationExample.wsdl](#)

Declared XML namespace:

urn:oasis:names:tc:legalxml-courtfiging:schema:xsd:WebServicesProfile-2.0

Abstract:

This document defines a Service Interaction Profile, as defined in section 5 of the LegalXML Electronic Court Filing 4.0 (ECF 4.0) specification. The Web Services Service Interaction Profile may be used to transmit ECF 4.0 messages between Internet-connected systems.

Status:

This document was last revised or approved by the OASIS LegalXML Electronic Court Filing TC 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/legalxml-courtfiging/>.

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/legalxml-courtfiging/ipr.php>).

Citation format:

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

[ECF-v4.0-WS-SIP-v2.01]

Electronic Court Filing 4.0 Web Services Service Interaction Profile Version 2.01. 10 May 2011. OASIS Committee Specification Draft 02 / Public Review Draft 01. <http://docs.oasis-open.org/legalxml-courtfiging/specs/ecf/v4.0/ecf-v4.0-webservices-spec/v2.01/csprd01/ecf-v4.0-webservices-spec-v2.01-csprd01.doc>.

Notices

Copyright © OASIS Open 2011. 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/who/trademark.php> for above guidance.

Table of Contents

1	Introduction.....	5
1.1	Relationship to ECF 4.0 Specifications	5
1.2	Relationship to other XML Specifications	5
1.2.1	W3C XML Schema 1.0.....	6
1.2.2	W3C Namespaces in XML	6
1.2.3	W3C Simple Object Access Protocol (SOAP) 1.1.....	6
1.2.4	W3C Web Services Description Language (WSDL) 1.1	6
1.2.5	W3C XML-Signature Syntax and Processing	6
1.2.6	WS-I Basic Profile 1.1	6
1.2.7	W3C SOAP 1.1 Binding for MTOM 1.0	6
1.2.8	WS-I Basic Security Profile 1.0	7
1.2.9	WS-ReliableMessaging Version 1.0.....	7
1.3	Terms and Definitions.....	7
1.4	Symbols and Abbreviations	8
1.5	Normative References	9
1.6	Non-Normative References	10
2	Profile Design	11
2.1	Service Interaction Profile Identifier.....	11
2.2	Transport Protocol	11
2.3	MDE Addressing.....	12
2.4	Operation Addressing.....	12
2.5	Request and Operation Invocation	12
2.6	Synchronous Mode Response	13
2.7	Asynchronous Mode Response.....	13
2.8	Message/Attachment Delimiters.....	13
2.9	Message Identifiers.....	13
2.10	Message Non-repudiation	13
2.11	Message Integrity	13
2.12	Message Confidentiality	13
2.13	Message Authentication	14
2.14	Message Reliability.....	14
2.15	Message Splitting and Assembly.....	14
2.16	Transmission Auditing	14
3	Service Definitions.....	15
4	Conformance	16
	Appendix A. (Informative) Acknowledgments	17
	Appendix B. (Informative) Revision History	18
	Appendix C. (Informative) Example Implementation	19
	Appendix D. (Informative) Example Transmissions	20
	D.1 Operation Invocation.....	20
	D.2 Synchronous Response.....	21
	D.3 Asynchronous Response	22

1 Introduction

This document defines a Service Interaction Profile, as called for in section 5 of [ECF 4.0]. The purpose of the Web Services Service Interaction Profile is to provide a web service-based system in conformance with the WS-I Basic Profile 1.1 ([WS-I BP 1.1]) and Basic Security Profile 1.0 ([WS-I BP 1.0]) for use with the [ECF 4.0] specification. This version adds support for bulk filings, improves security support for tokens, attachments, and rights management through inclusion of WS-Security 1.1 and adds supports for message splitting and assembly through inclusion of WS-Reliable Messaging 1.0.. This specification requires an active network connection between the sending and receiving MDEs.

1.1 Relationship to ECF 4.0 Specifications

The ECF 4.0 specification describes the technical architecture and the functional features of an electronic court filing system, that is, features needed to accomplish electronic filing in a court, pointing out both normative (required) and non-normative (optional) business processes it supports. The non-functional requirements associated with electronic filing transactions, and actions and services needed to accomplish the transactions, such as network structures and security infrastructures, are defined in related specifications, namely:

- Service interaction profile specifications defining communications infrastructures within which electronic filing transactions can take place.
- Document signature profile specifications that define mechanisms for stating or proving that a person signed a particular document.

This specification represents an ECF 4.0 service interaction profile based on web-services. It is intended for implementation in conjunction with the ECF 4.0 specification and at least one ECF 4.0 document signature profile specification. Specifically, in this service interaction profile, the implementation details for each of the Major Design Elements (MDEs), operations, and messages defined in the ECF 4.0 specification, are defined in Web Services Description Language (WSDL).

1.2 Relationship to other XML Specifications

Consistent with the ECF 4.0 principle of leveraging other existing, non-proprietary XML specifications wherever possible, this service interaction profile specification leverages previous specifications for web services messaging and security including the following:

- W3C XML Schema 1.0.
- W3C Namespaces in XML.
- W3C Simple Object Access Protocol (SOAP) 1.1.
- W3C Web WSDL 1.1.
- W3C XML-Signature Syntax and Processing.
- W3C SOAP 1.1 Binding for MTOM 1.0
- WS-I Basic Profile Version 1.1.
- WS-I Basic Security Profile Version 1.0.
- OASIS WS-Reliable Messaging 1.0.

The use of each of these specifications is described below.

40 **1.2.1 W3C XML Schema 1.0**

41 The W3C XML Schema 1.0 specification defines an application protocol for imposing constraints on the
42 storage layout and logical structure of data objects using text tags or “markup.” Compliance with the
43 requirements of the XML Schema 1.0 specification is REQUIRED for compliance with this service
44 interaction profile.

45 **1.2.2 W3C Namespaces in XML**

46 The W3C Namespaces in XML specification defines conventions for defining and referring to separate
47 XML tags. Compliance with the requirements of the Namespaces in XML specification is REQUIRED for
48 compliance with this service interaction profile.

49 **1.2.3 W3C Simple Object Access Protocol (SOAP) 1.1**

50 The W3C SOAP 1.1 specification defines message exchange patterns and message structures for use
51 with XML. Compliance with the requirements of the SOAP 1.1 specification is REQUIRED for compliance
52 with this service interaction profile.

53 **1.2.4 W3C Web Services Description Language (WSDL) 1.1**

54 The W3C WSDL specification enables the description of services as sets of endpoints operating on
55 messages. Compliance with the requirements of the WSDL 1.1 specification is REQUIRED for
56 compliance with this service interaction profile.

57 An MDE implementation MUST consist of a SOAP 1.1 web service that implements the SOAP HTTP
58 binding for that MDE’s portType from the [ECF-4.0-WebServicesProfile-Definitions.wsdl](#) document
59 (provided with this specification). Further, the implementation MUST be accompanied by an
60 implementation-specific WSDL document that imports the namespace defined in [ECF-4.0-
61 WebServicesProfile-Definitions.wsdl](#), and defines a `<wsdl:service>` element containing a
62 `<soap:address>` element with a `location` attribute whose value provides an HTTP URL at which the
63 MDE implementation can be invoked.

64 (Note that in the previous paragraph, a namespace prefix of “wsdl” is assumed to map to the
65 <http://schemas.xmlsoap.org/wsdl/> namespace, while the namespace prefix of “soap” is
66 assumed to map to the <http://schemas.xmlsoap.org/wsdl/soap/> namespace.)

67 An example (non-normative) implementation-specific WSDL document ([ECF-4.0-WebServicesProfile-
68 ImplementationExample.wsdl](#)) is provided with this specification.

69 **1.2.5 W3C XML-Signature Syntax and Processing**

70 The W3C XML Signature Syntax and Processing specification defines representations of signatures of
71 Web resources, portions of protocol messages (anything that may be referenced by a URI), and
72 procedures for computing and verifying such signatures. Compliance with the requirements of the XML
73 Signature Syntax and Processing specification is REQUIRED for compliance with this service interaction
74 profile.

75 **1.2.6 WS-I Basic Profile 1.1**

76 The WS-Interoperability Basic Profile 1.1 (**[WS-I BP 1.1]**) specification defines a set of best practices for
77 implementing interoperable web services. Compliance with the requirements of the **[WS-I BP 1.1]** is
78 REQUIRED for compliance with this service interaction profile.

79 **1.2.7 W3C SOAP 1.1 Binding for MTOM 1.0**

80 The SOAP 1.1 Binding for MTOM 1.0 (**[SOAP MTOM 1.0]**) defines a set of best practices for
81 implementing interoperable serialization of the SOAP envelope and its representation in the message.
82 This binding MUST be used as a replacement for the WS-I Attachments Profile 1.0 and the W3C Simple

83 SOAP Binding Profile in the WS-I Basic Profile **[WS-I BP 1.1]**. Compliance with the requirements of the [
84 **SOAP MTOM 1.0]** and the specifications that this binding references, the SOAP Message Transmission
85 Optimization Mechanism (MTOM) (**[MTOM]**) and the W3C XML-binary Optimized Packaging (XOP)
86 specifications (**[XOP]**), is REQUIRED for compliance with the web services service interaction profile.

87 **1.2.8 WS-I Basic Security Profile 1.0**

88 The WS-Interoperability Basic Security Profile Version 1.0 (**[WS-I BSP 1.0]**) complements **[WS-I BP 1.0]**
89 and defines a set of best practices for implementing interoperable and secure web services. With the
90 exception of the requirements for use of the WS-I Attachments Profile 1.0 and the W3C Simple SOAP
91 Binding Profile 1.0, compliance with the requirements of **[WS-I BSP 1.0]** is REQUIRED for compliance
92 with this service interaction profile. However, in many cases, **[WS-I BSP 1.0]** is underspecified. The
93 following options in **[WS-I BSP 1.0]** are REQUIRED for compliance with this web services service
94 interaction profile:

- 95 • E0002 - Security Tokens - Security tokens MUST be specified in additional security token profiles.
96 (NOTE: This will be determined in Court Policy)
- 97 • R3103 - A SIGNATURE MUST be a Detached Signature as defined by the XML Signature
98 specification.

99 **1.2.9 WS-ReliableMessaging Version 1.0**

100 The WS-Reliability 1.1 (**[WS-RM 1.0]**) specification complements **[WS-I BP 1.1]** and defines a set of
101 extensions for exchanging SOAP messages with guaranteed delivery, no duplicates, and guaranteed
102 message ordering.

103 **1.3 Terms and Definitions**

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

107

108 The key terms used in this specification include:

109 **Attachment**

110 Information transmitted between MDEs that is of an arbitrary format, and is related to the
111 message(s) in the transmission in a manner defined in the ECF 4.0 specification. An attachment
112 may be in XML format, non-XML text format, encoded binary format, or un-encoded binary
113 format.

114 **Callback message**

115 A message transmission returned by some operations some time after the operation was invoked
116 (asynchronously).

117 **Document**

118 Represents an electronic version of the paper that would have been sent as paper.

119 **Docketing**

120 The process invoked when a court receives a pleading, order, or notice, when no errors in
121 transmission or in presence of required content have occurred, and when the pleading, order, or
122 notice is recorded as a part of the official record.

123 **Filer**

124 Attorneys or pro se litigants are individuals who assemble and submit Filings (data and
125 documents).

126 **Filing**

127 Electronic document collection that has been assembled for filing on a designated court case.

128 **Major Design Element (MDE)**

129 A logical grouping of operations representing a significant business process supported by ECF
130 4.0. Each MDE operation receives one or more messages, returns a synchronous response
131 message, and optionally sends an asynchronous response message back to the original sender.

132 **Message**

133 Information transmitted between MDEs that consists of a well-formed XML document that is valid
134 against one of the defined message structure schemas in the ECF 4.0 specification. A message
135 may be related to one or more attachments in a manner defined in the ECF 4.0 specification.

136 **Message Transmission**

137 The sending of one or more messages and associated attachments to an MDE. Each
138 transmission must invoke or respond to an operation on the receiving MDE, as defined in the
139 ECF 4.0 specification.

140 **Operation (or MDE Operation)**

141 A function provided by an MDE upon receipt of one or more messages. The function provided by
142 the operation represents a significant step in the court filing business process. A sender invokes
143 an operation on an MDE by transmitting a set of messages to that MDE, addressed to that
144 operation.

145 **Operation signature**

146 A definition of the input message(s) and synchronous response message associated with an
147 operation. Each message is given a name and a type by the operation. The type is defined by a
148 single one of the message structures defined in the ECF 4.0 specification.

149 **Receiving MDE**

150 In an Electronic Court Filing operation, the MDE that receives the request with the operation
151 invocation performs the operation and sends the response.

152 **Sending MDE**

153 In an Electronic Court Filing operation, the MDE that sends the request including the operation
154 invocation and receives the response with the results of the operation.

155 **Synchronous response**

156 A message transmission returned immediately (synchronously) as the result of an operation.
157 Every operation has a synchronous response.

158 **1.4 Symbols and Abbreviations**

159 The key symbols and abbreviations used in this specification include:

160

161 **ECF 4.0**

162 OASIS LegalXML Electronic Court Filing 4.0

163 **MDE**

164 Major Design Element

165 **OASIS**

166 Organization for the Advancement of Structured Information Standards

167 **SOAP**

168 Simple Object Access Protocol

169 **XML**

170 eXtensible Markup Language
171 **W3C**
172 World Wide Web Consortium
173 **WSDL**
174 Web Services Description Language
175 **WS-I**
176 Web Services Interoperability Organization
177

178 **1.5 Normative References**

179 **[ECF 4.0]** A. Angione, J. Cabral (editors), *LegalXML Electronic Court Filing v4.01*,
180 <http://docs.oasis-open.org/legalxml-court filing/specs/ecf/v4.01/>, OASIS
181 Committee Specification Draft, February 2011.

182 **[MTOM]** M. Gudgin, N Mendelsohn, M Nottingham, H Ruellan, SOAP Message
183 Transmission Optimization Mechanism, <http://www.w3.org/TR/soap12-mtom/>,
184 W3C Recommendation, January 2005.

185 **[Namespaces]** T. Bray, *Namespaces in XML*, <http://www.w3.org/TR/xml-names/>, W3C
186 Recommendation, December 2009.

187 **[RFC2045]** N. Freed, *Multipurpose Internet Mail Extensions (MIME) Part One: Format of*
188 *Internet Message Bodies*, <http://www.ietf.org/rfc/rfc2045.txt>, IETF RFC 2045,
189 November 1996.

190 **[RFC2046]** N. Freed, *Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types*,
191 <http://www.ietf.org/rfc/rfc2046>, IETF RFC 2046, November 1996.

192 **[RFC2119]** S. Bradner, *Key words for use in RFCs to Indicate Requirement Levels*,
193 <http://www.ietf.org/rfc/rfc2119>, IETF RFC 2119, March 1997.

194 **[RFC2616]** R. Fielding, et. al., *Hypertext Transfer Protocol -- HTTP/1.1*,
195 <http://www.ietf.org/rfc/rfc2616>, IETF RFC 2616, June 1999.

196 **[RFC2617]** J. Franks, P. Hallam-Baker, J. Hostetler, S. Lawrence, P. Leach, A. Luotonen, E.
197 Sink, and L. Stewart, *HTTP Authentication: Basic and Digest Access*
198 *Authentication*, <http://www.ietf.org/rfc/rfc2617>, RFC 2617, June 1999.

199 **[RFC4122]** Leach, et al., *A Universally Unique Identifier (UUID) URN Namespace*,
200 <http://www.ietf.org/rfc/rfc4122.txt>, IETF RFC 4112, July 2005.

201 **[Schema Part 1]** H. S. Thompson, D. Beech. M. Maloney, N. Mendelsohn, *XML Schema Part 1:*
202 *Structures Second Edition*, <http://www.w3.org/TR/xmlschema-1/>, W3C
203 Recommendation, October 28, 2004.

204 **[Schema Part 2]** P. Biron, A. Malhotra, *XML Schema Part 2: Datatypes Second Edition*,
205 <http://www.w3.org/TR/xmlschema-2/>, W3C Recommendation, October 28, 2004.

206 **[SOAP 1.1]** D. Box, et. al., *Simple Object Access Protocol (SOAP) 1.1*,
207 <http://www.w3.org/TR/2000/NOTE-SOAP-20000508>, W3C Note, May 8, 2000.

208 **[SOAP MTOM 1.0]** D. Angelov, C. Ferris, A Karmarkar, C Liu, J Marsh, J Mischikinsky, A Nadalin, U
209 Yařinalp, *SOAP 1.1 Binding for MTOM 1.0*,
210 <http://www.w3.org/Submission/soap11mtom10/>, W3C Member Submission, April
211 05, 2006.

212 **[WSDL 1.1]** E. Christensen, F Curbera, G Meredith, S. Weerawarana, *Web Services*
213 *Description Language 1.1*, <http://www.w3.org/TR/wsdl>, W3C Note, March 15,
214 2001.

215 **[WS-I BP1.1]** K. Ballinger, D. Ehnebuske, C. Ferris, M. Gudgin, M. Nottingham, C. K. Liu, M.
216 Nottingham, P Yendluri, *Basic Profile Version 1.1*, [http://www.ws-](http://www.ws-i.org/profiles/basicprofile-1.1-2004-08-24.html)
217 [i.org/profiles/basicprofile-1.1-2004-08-24.html](http://www.ws-i.org/profiles/basicprofile-1.1-2004-08-24.html), WS-I Organization, August 2004.

- 218 **[WS-I BSP 1.1]** M. McIntosh, M. Gudgin, K. Scott Morrison, A. Barbir, *Basic Security Profile*
219 *Version 1.1 (Working Group Approval Draft)*, [http://www.w3-](http://www.w3.org/Profiles/BasicSecurityProfile-1.1.html)
220 [i.org/Profiles/BasicSecurityProfile-1.1.html](http://www.w3.org/Profiles/BasicSecurityProfile-1.1.html), WS-I Organization, January 2010.
- 221 **[WS-RM 1.0]** OASIS Committee Specification, "*WS-ReliableMessaging 1.0*", [http://docs.oasis-](http://docs.oasis-open.org/ws-rx/wsrn/200702/wsrn-1.1-spec-cs-01.pdf)
222 [open.org/ws-rx/wsrn/200702/wsrn-1.1-spec-cs-01.pdf](http://docs.oasis-open.org/ws-rx/wsrn/200702/wsrn-1.1-spec-cs-01.pdf), April 11, 2007
- 223 **[XML 1.0]** T. Bray, *Extensible Markup Language (XML) 1.0 (Fifth Edition)*,
224 <http://www.w3.org/TR/xml/>, W3C Recommendation, November 2008.
- 225 **[XMLENC]** D. Eastlake, J. Reagle, *XML Encryption Syntax and Processing*,
226 <http://www.w3.org/TR/xmlenc-core/>, W3C Recommendation, December 2002.
- 227 **[XMLSIG]** D. Eastlake., J. Reagle, D. Solo, *XML-Signature Syntax and Processing*,
228 <http://www.w3.org/TR/xmldsig-core/>, W3C Recommendation, June 2008.
- 229 **[XOP]** M. Gudgin, N Mendelsohn, M Nottingham, H Ruellan, *XML-binary Optimized*
230 *Packaging*, <http://www.w3.org/TR/2005/REC-xop10-20050125/>.), W3C
231 Recommendation, January 2005.

232 **1.6 Non-Normative References**

- 233 **[JRA WS-SIP]** *Global Justice Reference Architecture Web Services Service Interaction Profile*
234 *1.1*, https://it.ojp.gov/process_links.jsp?link_id=5800, Global
235 Infrastructure/Standards Working Group, August 1, 2007
- 236

237 2 Profile Design

238 This section describes the design of the Web Services Service Interaction Profile and identifies how it
239 satisfies the requirements of a document signature profile listed in Section 5 of the **[ECF 4.0]**
240 specification. In addition, this profile is intended for compatibility with the Global Justice Reference
241 Architecture Web Services Service Interaction Profile **[JRA WS-SIP]**.

242 2.1 Service Interaction Profile Identifier

243 Each ECF 4.0 service interaction profile **MUST** be identified with a unique URI which is used in the ECF
244 4.0 court policy to identify the service interaction profile(s) that a given MDE supports. The ECF 4.0 Web
245 Services Service Interaction Profile 2.0 will be identified by the following URI:

246 `urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:WebServicesProfile-2.0`

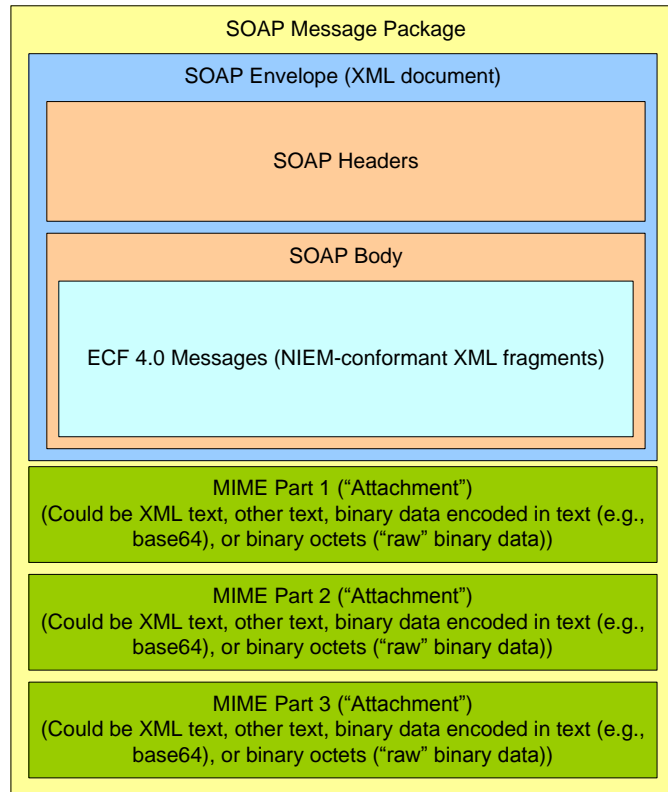
247 All ECF 4.0 messages sent via this service interaction profile **MUST** include this URI in the
248 `<SendingMDEProfileCode>` element. In addition, any court supporting this service interaction profile
249 **MUST** include this URI in the `<SupportedMessageProfile>` element in the
250 **CourtFilingResponseMessage**.

251 2.2 Transport Protocol

252 Each ECF 4.0 message transmission sent using this service interaction profile **MUST** be encapsulated in
253 a SOAP message over the HTTP 1.1 protocol as defined in the **[WSI-I BP 1.1]** and **[SOAP MTOM]**
254 specifications. Figure 1 illustrates the containment of ECF 4.0 messages and attachments within a SOAP
255 Message Package. For compliance with this specification, a SOAP envelope **MUST** contain one or more
256 messages and **MAY** contain one or more attachments.

257

258 Figure 1. SOAP Envelope with ECF 4.0 Messages and Attachments



259

260 2.3 MDE Addressing

261 Each ECF message transmission sent using this service interaction profile MUST identify the sending and
 262 receiving MDEs with universally unique address identifiers. The identifier for each MDE will be assigned
 263 by the organization that manages the MDE and MUST be the HyperText Transfer Protocol (HTTP) or
 264 HTTP over Secure Socket Layer (SSL) permanent URL for the MDE web service.

265 This URL MUST be the value of the `location` attribute of the `<soap:address>` element contained within
 266 the `<wsdl:service>` element that binds the MDE's portType to a service, and that is defined in the
 267 implementation-specific WSDL document discussed in section 1.2.4 above.

268 For instance, a conformant MDE ID of a web service at `courts.wa.gov` using HTTP over SSL on port 8000
 269 would be as follows:

270 `https://courts.wa.gov:8000`

271 2.4 Operation Addressing

272 Each message transmission MUST either identify the operation or operations being invoked or be a
 273 synchronous response to a previous request. Each operation MUST be either a REQUIRED operation as
 274 defined in the ECF 4.0 specification or an OPTIONAL operation identified as supported by the court
 275 through the current machine-readable court policy. The response to a request for an operation not
 276 supported by the court MUST be reported using the ECF 4.0 `<ErrorCode>` element in the core message
 277 and MAY also include a `SOAPFault` in the SOAP envelope.

278 2.5 Request and Operation Invocation

279 Each message transmission MUST identify the operation being invoked within the SOAP Body only; the
 280 (qualified) operation name MUST be the qualified name of the first child element of the SOAP body
 281 element, as called for in section 7.1 of the **[SOAP 1.1]** specification.

282 An MDE implementation MAY allow message transmissions that include a SOAPAction HTTP header.
283 In compliance with the [WS-I BP 1.1] specification, a receiving MDE MAY NOT rely on the value of the
284 SOAPAction HTTP header in processing the message.

285 2.6 Synchronous Mode Response

286 Synchronous responses to requests MUST be encoded using the MIME binding defined in Section 4.1.1
287 of the [SOAP MTOM 1.0] specification.

288 2.7 Asynchronous Mode Response

289 The receiving MDE MUST deliver the asynchronous response to a request sent using the web services
290 service interaction profile by sending the asynchronous response to the sending MDE via the web
291 services service interaction profile. The response message transmission MUST conform to the rules for
292 message transmissions established in section 2.5 of this specification above.

293 2.8 Message/Attachment Delimiters

294 The ECF 4.0 messages MUST be encapsulated in the SOAP Body. All other attachments MUST be
295 included in separate MIME parts as shown in Figure 1. The delimiters between the message and the first
296 attachment, and between attachments, MUST comply with the rules for delimiting MIME parts as defined
297 in [RFC2045].

298 2.9 Message Identifiers

299 Each MIME part that includes an attachment MUST have a unique "Content-ID" as defined in [RFC2045]
300 that uniquely identifies the content within that part.

301 2.10 Message Non-repudiation

302 The SOAP message MAY include a digital signature applied to the SOA Body and all MIME parts that
303 contain messages or attachments. The digital signature MUST be conformant with Section 8 of the [WS-I
304 BSP 1.0] specification which references the [XMLSIG] specification. The algorithms defined by
305 [XMLSIG] support non-repudiation of the signer and signing date through a digital signature created
306 using the signer's private key. Because the sender is the only one with access to the private key and the
307 date is included in the signature, receivers can be reasonably assured of the signer and signing date.

308 2.11 Message Integrity

309 The algorithms defined by [XMLSIG] support message integrity through inclusion of a public-key-based
310 digital signature. Because the signing date and message hash are included in the signature and the
311 entire signature is computed using the sender's private key, the receiver can compare the hashes to
312 verify that the message has not been altered since it left the control of the sender on the specified date.

313 2.12 Message Confidentiality

314 If the Filing Review MDE supports the filing of confidential filings and publishes the court's public key in
315 court policy, messages and attachments MAY be encrypted for filing into the court according to Section 9
316 of the [WS-I BSP 1.0] specification which references the [XMLENC] specification. Because the Filing
317 Review MDE is the only one with access to the court's private key, filers can be reasonably assured that
318 only the Filing Review MDE will be able to read the message or attachment.

319 This mechanism MAY be used to protect sensitive or confidential information in a filing such as the
320 FilingPaymentMessage. However, this specification does NOT support the transmission of messages and
321 attachments encrypted with the court's public key to other parties in the case. Any messages and
322 attachments transmitted to other parties MUST be either encrypted with the party's public key or not

323 encrypted. This specification and the ECF 4.0 specification do NOT define the exchange or publication of
324 public keys by persons or organizations other than the court.

325 **2.13 Message Authentication**

326 Each MDE MAY define HTTP credentials for authentication to access the operations supported by that
327 MDE. If authentication is required, the sending MDE MUST include the credentials in the request as
328 defined in [RFC2617].

329 For instance, the Filing Review MDE MAY assign user ID and password pairs to each supported Filing
330 Assembly MDE, and require authentication for ReviewFiling operations but not query operations. In that
331 case, each Filing Assembly MDE would include the user ID and password assigned to them in each filing.

332 **2.14 Message Reliability**

333 If a court expresses support for message reliability in human-readable court policy, a sending MDE MAY
334 include reliability extensions to the SOAP envelope as defined in the [WS-RM 1.0] specification. An MDE
335 that receives a request with a SOAP envelope that includes reliability extensions MUST include reliability
336 extensions as defined by [WS-RM 1.0] in the response.

337 **2.15 Message Splitting and Assembly**

338 WS-Reliable Messaging defines mechanisms by which messages MAY be split into multiple pieces that
339 are assigned sequence numbers and transmitted separately by the RM Source (sending MDE) and
340 reassembled into the complete message by the RM Destination (receiving MDE).

341

342 **2.16 Transmission Auditing**

343 An implementation of the web services message profile MUST ensure that the complete SOAP message,
344 including the SOAP envelope, any attachments, and signatures, is available to the receiving MDE for
345 persisting and auditing purposes.

346

347 **3 Service Definitions**

348 Implementation of this service interaction profile MUST be described in a WSDL file that imports the
349 service definitions from the [ECF-4.0-WebServicesProfile-Definitions.wsdl](#) file included with this
350 specification.

351 **4 Conformance**

352 An implementation conforms with the ECF 4.0 Web Services SIP if the implementation meets the
353 requirements identified by capitalized key words [RFC2119] in Sections 1 and 2 and publishes a WSDL
354 as required in Section 3.

355

356

Appendix A. (Informative) Acknowledgments

357 The following individuals were members or voting members of the committee during the development of
358 this specification:

359 **Participants:**

360 Rolly Chambers, American Bar Association
361 John Messing, American Bar Association
362 Adam Angione, Courthouse News Service
363 Eric Eastman Doxpop, LLC
364 Robert DeFilippis, Associate
365 Chester Ensign, Associate
366 Gary Poindexter, Associate
367 Michael Alexandrou, Judicial Council of Georgia
368 Shawn Artrip, Judicial Council of Georgia,
369 Robbie Diaz, Judicial Council of Georgiar
370 Hui Ji, Judicial Council of Georgia
371 Morgan Medders, Judicial Council of Georgia
372 Scott Edson, LA County Information Systems Advisory Body
373 Ali Farahani, LA County Information Systems Advisory Body
374 John Ruegg, LA County Information Systems Advisory Body
375 CJ Allen, Maricopa County
376 Robin Gibson, Missouri Office of State Courts Admin
377 James Cabral, MTG Management Consultants, LLC
378 Thomas Clarke, National Center for State Courts
379 Diana Graski, National Center for State Courts
380 Jim Harris, National Center for State Courts
381 Jason Hill, New York State Office of Court Administration, DoT
382 Robert O'Brien, Ottawa Courts Administration Service
383 George Knecht, PC Intellect, LLC
384 Mark Ladd, Property Records Industry Assn.
385 Ron Bowmaster. Utah Administrative Office of the Courts

Appendix B. (Informative) Revision History

Revision	Date	Editor	Changes Made
Wd01	2008-08-18	James Cabral	Initial version
Wd02	2008-08-25	James Cabral	Revised WSDL
Wd03	2008-09-03	James Cabral	Changed "WebServicesMessagingProfile" to "WebServicesProfile"
2.01	2009-07-14	James Cabral	Made corrections to the WSDL to fix conformance issues with WS-I Basic Profile 1.1
Cd01	2011-04-18	James Cabral	Made minor changes to conformance section and corrected several broken links.

388

Appendix C. (Informative) Example Implementation

389 This non-normative section provides an example WSDL implementation of this service interaction profile.
390 This is also included in [ECF-4.0-WebServicesProfile-ImplementationExample.wsdl](#) file included with
391 this specification. Note that the following is for illustrative purposes only.

392

393

394

395

396

397

398

399

400

401

402

403

404

405

406

407

408

409

410

411

412

413

414

415

416

417

418

419

420

421

422

423

424

425

426

427

428

429

430

431

432

433

```
<definitions
  targetNamespace="urn:oasis:names:tc:legalxml-courtfiling:wsl:WebServiceProfile-
ImplementationExample-4.0"
  xmlns:wsl="urn:oasis:names:tc:legalxml-courtfiling:wsl:WebServiceProfile-
Definitions-4.0"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:soap="http://schemas.xmlsoap.org/wsl/soap/"
  xmlns:wsl="http://schemas.xmlsoap.org/wsl/"
  xmlns="http://schemas.xmlsoap.org/wsl/"

  <import namespace="urn:oasis:names:tc:legalxml-courtfiling:wsl:WebServiceProfile-
Definitions-4.0" location="ECF-4.0-WebServicesProfile-Definitions.wsl"/>

  <service name="ServiceMDEService">
    <port name="ServiceMDEPort" binding="wsl:ServiceMDEPortSOAPBinding">
      <soap:address location="https://localhost/..."/>
    </port>
  </service>

  <service name="FilingAssemblyMDEService">
    <port name="FilingAssemblyMDEPort"
binding="wsl:FilingAssemblyMDEPortSOAPBinding">
      <soap:address location="https://localhost/..."/>
    </port>
  </service>

  <service name="CourtRecordMDEService">
    <port name="CourtRecordMDEPort" binding="wsl:CourtRecordMDEPortSOAPBinding">
      <soap:address location="https://localhost/..."/>
    </port>
  </service>

  <service name="FilingReviewMDEService">
    <port name="FilingReviewMDEPort" binding="wsl:FilingReviewMDEPortSOAPBinding">
      <soap:address location="https://localhost/..."/>
    </port>
  </service>
</definitions>
```

434

435 Appendix D. (Informative) Example Transmissions

436 This non-normative section provides an example transmission that demonstrates an operation invocation,
437 a synchronous response, and an asynchronous response using this service interaction profile. Note that
438 these examples are for illustrative purposes only.

439 D.1 Operation Invocation

440 This is an example of a request including a ReviewFiling operation invocation.

441

```
442 MIME-Version: 1.0
443 Content-Type: Multipart/Related; boundary=boundary;
444     type="application/xop+xml";
445     start="Envelope"
446     start-info="text/xml"
447
448 --boundary
449 Content-Type: application/xop+xml;
450     text/xml; charset="UTF-8"
451 Content-Transfer-Encoding: 8bit
452 Content-ID: Envelope
453
454 <?xml version='1.0' ?>
455 <env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
456     <env:Body xmlns:types="http://example.com/some-namespace">
457         <types:ReviewFiling>
458             <CoreFilingMessage>
459                 ...
460             </CoreFilingMessage>
461             <PaymentMessage>
462                 ...
463             </PaymentMessage>
464         </types:ReviewFiling>
465     </env:Body>
466 </env:Envelope>
467
468 --boundary
469 Content-Type: application/pdf
470 Content-Transfer-Encoding: binary
471 Content-ID: Attachment1
472
473 ...Lead Document...
474 --boundary-
475 Content-Type: application/pdf
476 Content-Transfer-Encoding: binary
477 Content-ID: Attachment2
478
479 ...Connected Document...
480 --boundary--
```

485

486

487 D.2 Synchronous Response

488 This is an example of a MessageReceiptMessage synchronous response.

```
489 MIME-Version: 1.0
490 Content-Type: Multipart/Related; boundary=boundary;
491     type="application/xop+xml";
492     start="Envelope"
493     start-info="text/xml"
494
495 --boundary
496 Content-Type: application/xop+xml;
497     text/xml; charset="UTF-8"
498 Content-Transfer-Encoding: 8bit
499 Content-ID: Envelope
500
501 <?xml version='1.0' ?>
502 <env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
503     <env:Body xmlns:types="http://example.com/some-namespace">
504         <types:ReviewFiling-Response>
505
506             <MessageReceiptMessage>
507                 ...
508             </MessageReceiptMessage>
509
510         </types:ReviewFiling-Response>
511     </env:Body>
512 </env:Envelope>
513
```

514

515

516 D.3 Asynchronous Response

517 This is an example of a NotifyFilingReviewComplete asynchronous response.

518

```
519 MIME-Version: 1.0
520 Content-Type: Multipart/Related; boundary=boundary;
521     type="application/xop+xml";
522     start="Envelope"
523     start-info="text/xml"
524
525 --boundary
526 Content-Type: application/xop+xml;
527     text/xml; charset="UTF-8"
528 Content-Transfer-Encoding: 8bit
529 Content-ID: Envelope
530
531 <?xml version='1.0' ?>
532 <env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
533     <env:Body xmlns:types="http://example.com/some-namespace">
534         <types:NotifyFilingReviewComplete>
535
536             <ReviewFilingCallbackMessage>
537                 ...
538             </ReviewFilingCallbackMessage>
539
540             <PaymentReceiptMessage>
541                 ...
542             </PaymentReceiptMessage>
543
544         </types:NotifyFilingReviewComplete>
545     </env:Body>
546 </env:Envelope>
547
548 --boundary
549 Content-Type: application/pdf
550 Content-Transfer-Encoding: binary
551 Content-ID: Attachment1
552
553 ...Lead Document...
554 --boundary-
555 Content-Type: application/pdf
556 Content-Transfer-Encoding: binary
557 Content-ID: Attachment2
558
559 ...Connected Document...
560 --boundary--
561
```

562

563

564