Electronic Court Filing 4.0 Web Services Service Interaction Profile Version 2.01

Committee Specification Draft 02

10 May 2011

Specification URIs:

This version:

http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/v2.01/csd02/ecf-v4.0-webservices-spec-v2.01-csd02.doc (Authoritative)
http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/v2.01/csd02/ecf-v4.0-webservices-spec-v2.01-csd02.html
http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/v2.01/csd02/ecf-v4.0-webservices-spec-v2.01-csd02.pdf

Previous version:

http://docs.oasis-open.org/legalxml-courtfiling/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-courtfiling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/ecf-v4.0-webservices-v2.0-spec-cd01.html
http://docs.oasis-open.org/legalxml-courtfiling/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-courtfiling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/ecf-v4.0-webservices-v2.01-spec.doc (Authoritative)
http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/ecf-v4.0-webservices-v2.01-spec.html
http://docs.oasis-open.org/legalxml-courtfiling/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-courtfiling: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-courtfiling/.

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-courtfiling/ipr.php).

Citation format:

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

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

Electronic Court Filing 4.0 Web Services Service Interaction Profile Version 2.01. 10 May 2011. OASIS Committee Specification Draft 02. http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.0/ecf-v4.0-webservices-spec/v2.01/csd02/ecf-v4.0-webservices-spec-v2.01-csd02.doc.

Notices

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

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.

1.2.1 W3C XML Schema 1.0

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

1.2.2 W3C Namespaces in XML

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

1.2.3 W3C Simple Object Access Protocol (SOAP) 1.1

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

1.2.4 W3C Web Services Description Language (WSDL) 1.1

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

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

(Note that in the previous paragraph, a namespace prefix of "wsdl" is assumed to map to the `http://schemas.xmlsoap.org/wsdl/` namespace, while the namespace prefix of "soap" is assumed to map to the `http://schemas.xmlsoap.org/wsdl/soap/` namespace.)

An example (non-normative) implementation-specific WSDL document (`ECF-4.0-WebServicesProfile-ImplementationExample.wsdl`) is provided with this specification.

1.2.5 W3C XML-Signature Syntax and Processing

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

1.2.6 WS-I Basic Profile 1.1

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

1.2.7 W3C SOAP 1.1 Binding for MTOM 1.0

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

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

1.2.8 WS-I Basic Security Profile 1.0

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

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

1.2.9 WS-ReliableMessaging Version 1.0

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

1.3 Terms and Definitions

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]**.

The key terms used in this specification include:

Attachment

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

Callback message

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

Document

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

Docketing

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

Filer

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

Filing

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

Major Design Element (MDE)

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

Message

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

Message Transmission

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

Operation (or MDE Operation)

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

Operation signature

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

Receiving MDE

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

Sending MDE

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

Synchronous response

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

1.4 Symbols and Abbreviations

The key symbols and abbreviations used in this specification include:

ECF 4.0

OASIS LegalXML Electronic Court Filing 4.0

MDE

Major Design Element

OASIS

Organization for the Advancement of Structured Information Standards

SOAP

Simple Object Access Protocol

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-courtfiling/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 Yalçınalp, *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-
217 i.org/profiles/basicprofile-1.1-2004-08-24.html, WS-I Organization, August 2004.

[WS-I BSP 1.1] M. McIntosh, M. Gudgin, K. Scott Morrison, A. Barbir, *Basic Security Profile Version 1.1 (Working Group Approval Draft)*, http://www.ws-i.org/Profiles/BasicSecurityProfile-1.1.html, WS-I Organization, January 2010.

[WS-RM 1.0] OASIS Committee Specification, "*WS-ReliableMessaging 1.0"*, http://docs.oasis-open.org/ws-rx/wsrm/200702/wsrm-1.1-spec-cs-01.pdf, April 11, 2007

[XML 1.0] T. Bray, *Extensible Markup Language (XML) 1.0 (Fifth Edition),* http://www.w3.org/TR/xml/, W3C Recommendation, November 2008.

[XMLENC] D. Eastlake, J. Reagle, *XML Encryption Syntax and Processing*, http://www.w3.org/TR/xmlenc-core/, W3C Recommendation, December 2002.

[XMLSIG] D. Eastlake., J. Reagle, D. Solo, *XML-Signature Syntax and Processing*, http://www.w3.org/TR/xmldsig-core/, W3C Recommendation, June 2008.

[XOP] M. Gudgin, N Mendelsohn, M Nottingham, H Ruellan, *XML-binary Optimized Packaging*, http://www.w3.org/TR/2005/REC-xop10-20050125/.), W3C Recommendation, January 2005.

1.6 Non-Normative References

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

2 Profile Design

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

2.1 Service Interaction Profile Identifier

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

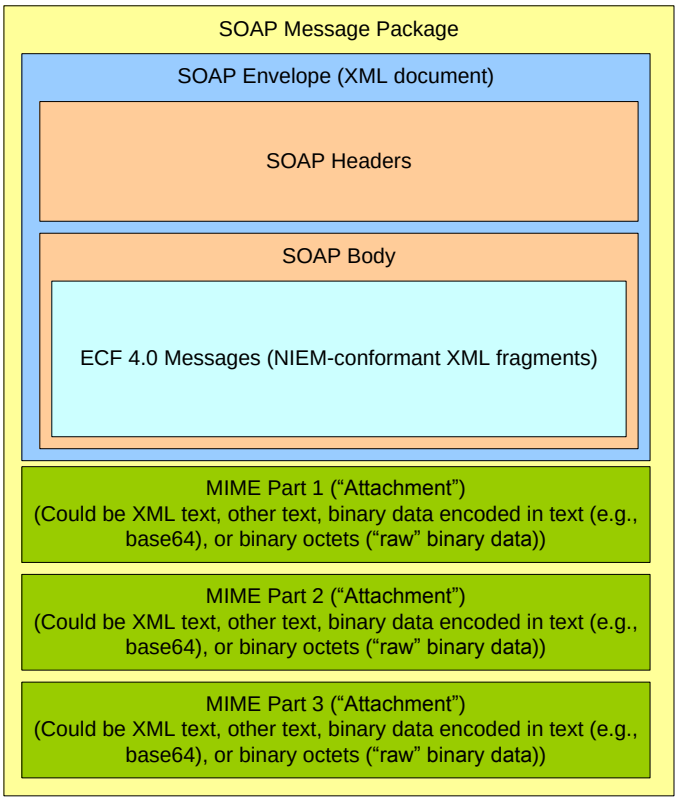
`urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:WebServicesProfile-2.0`

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

2.2 Transport Protocol

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

Figure 1. SOAP Envelope with ECF 4.0 Messages and Attachments



2.3 MDE Addressing

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

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

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

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

2.4 Operation Addressing

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

2.5 Request and Operation Invocation

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

An MDE implementation MAY allow message transmissions that include a `SOAPAction` HTTP header.

In compliance with the **[WSI-I BP 1.1]** specification, a receiving MDE MAY NOT rely on the value of the `SOAPAction` HTTP header in processing the message.

2.6 Synchronous Mode Response

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

2.7 Asynchronous Mode Response

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

2.8 Message/Attachment Delimiters

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

2.9 Message Identifiers

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

2.10 Message Non-repudiation

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

2.11 Message Integrity

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

2.12 Message Confidentiality

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

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

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

2.13 Message Authentication

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

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

2.14 Message Reliability

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

2.15 Message Splitting and Assembly

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

2.16 Transmission Auditing

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

3 Service Definitions

Implementation of this service interaction profile MUST be described in a WSDL file that imports the service definitions from the `ECF-4.0-WebServicesProfile-Definitions.wsdl` file included with this specification.

4 Conformance

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

Appendix A. (Informative) Acknowledgments

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

Participants:

Rolly Chambers, American Bar Association
John Messing, American Bar Association
Adam Angione, Courthouse News Service
Eric Eastman Doxpop, LLC
Robert DeFilippis, Associate
Chester Ensign, Associate
Gary Poindexter, Associate
Michael Alexandrou, Judicial Council of Georgia
Shawn Artrip, Judicial Council of Georgia,
Robbie Diaz, Judicial Council of Georgiar
Hui Ji, Judicial Council of Georgia
Morgan Medders, Judicial Council of Georgia
Scott Edson, LA County Information Systems Advisory Body
Ali Farahani, LA County Information Systems Advisory Body
John Ruegg, LA County Information Systems Advisory Body
CJ Allen, Maricopa County
Robin Gibson, Missouri Office of State Courts Admin
James Cabral, MTG Management Consultants, LLC
Thomas Clarke, National Center for State Courts
Diana Graski, National Center for State Courts
Jim Harris, National Center for State Courts
Jason Hill, New York State Office of Court Administration, DoT
Robert O'Brien, Ottawa Courts Administration Service
George Knecht, PC Intellect, LLC
Mark Ladd, Property Records Industry Assn.
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.

Appendix C. (Informative) Example Implementation

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

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

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

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

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

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

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

</definitions>
```

Appendix D. (Informative) Example Transmissions

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

D.1 Operation Invocation

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

```
MIME-Version: 1.0
Content-Type: Multipart/Related; boundary=boundary;
   type=”application/xop+xml”;
   start="Envelope"
   start-info=”text/xml”

--boundary
Content-Type:application/xop+xml;
 text/xml; charset="UTF-8"
Content-Transfer-Encoding: 8bit
Content-ID: Envelope

<?xml version='1.0' ?>
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
    <env:Body xmlns:types="http://example.com/some-namespace">
        <types:ReviewFiling>

          <CoreFilingMessage>
                …
          </CoreFilingMessage>

          <PaymentMessage>
                …
          </PaymentMessage>

        </types:ReviewFiling>
    </env:Body>
</env:Envelope>

--boundary
Content-Type: application/pdf
Content-Transfer-Encoding: binary
Content-ID: Attachment1

...Lead Document...
--boundary—
Content-Type: application/pdf
Content-Transfer-Encoding: binary
Content-ID: Attachment2

...Connected Document...
--boundary--
```

D.2 Synchronous Response

This is an example of a MessageReceiptMessage synchronous response.

```
MIME-Version: 1.0
Content-Type: Multipart/Related; boundary=boundary;
   type=”application/xop+xml”;
   start="Envelope"
   start-info=”text/xml”

--boundary
Content-Type:application/xop+xml;
 text/xml; charset="UTF-8"
Content-Transfer-Encoding: 8bit
Content-ID: Envelope

<?xml version='1.0' ?>
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
    <env:Body xmlns:types="http://example.com/some-namespace">
        <types:ReviewFiling-Response>

          <MessageReceiptMessage>
                …
          </MessageReceiptMessage>

        </types:ReviewFiling-Response>
    </env:Body>
</env:Envelope>
```

D.3 Asynchronous Response

This is an example of a NotifyFilingReviewComplete asynchronous response.

```
MIME-Version: 1.0
Content-Type: Multipart/Related; boundary=boundary;
   type=”application/xop+xml”;
   start="Envelope"
   start-info=”text/xml”

--boundary
Content-Type:application/xop+xml;
 text/xml; charset="UTF-8"
Content-Transfer-Encoding: 8bit
Content-ID: Envelope

<?xml version='1.0' ?>
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
    <env:Body xmlns:types="http://example.com/some-namespace">
        <types:NotifyFilingReviewComplete>

          <ReviewFilingCallbackMessage>
                …
          </ReviewFilingCallbackMessage>

          <PaymentReceiptMessage>
                …
          </PaymentReceiptMessage>

        </types:NotifyFilingReviewComplete>
    </env:Body>
</env:Envelope>

--boundary
Content-Type: application/pdf
Content-Transfer-Encoding: binary
Content-ID: Attachment1

...Lead Document...
--boundary—
Content-Type: application/pdf
Content-Transfer-Encoding: binary
Content-ID: Attachment2

...Connected Document...
--boundary--
```