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Additional artifacts:

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

- XML schemas: http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.01/ecf-v4.01-spec/os/xsd/
- XML sample messages: http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.01/ecf-v4.01-spec/os/xml/
- Model: http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.01/ecf-v4.01-spec/os/model/
- Genericode code lists: http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.01/ecf-v4.01-spec/os/gc/

Related work:

This specification replaces or supersedes:

- OASIS LegalXML Electronic Court Filing Version 3.0. 15 November 2005. http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v3.0/
- OASIS Electronic Court Filing Version 4.0. 21 September 2008. http://docs.oasis-open.org/legalxml-courtfiling/specs/ecf/v4.0/ecf-v4.0-spec/

This specification is related to:

• National Information Exchange Model 2.0

Declared XML namespaces:

urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:AppInfo-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:AppellateCase-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:BankruptcyCase-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CaseListQueryMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CaseListResponseMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CaseQueryMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CaseResponseMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CitationCase-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CivilCase-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CommonTypes-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CoreFilingMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CourtPolicyQueryMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CourtPolicyResponseMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:CriminalCase-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:DocumentQueryMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:DocumentResponseMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:DomesticCase-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:FeesCalculationQueryMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:FeesCalculationResponseMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:FilingListQueryMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:FilingListResponseMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:FilingStatusQueryMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:FilingStatusResponseMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:JuvenileCase-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:MessageReceiptMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:PaymentMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:PaymentReceiptMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:RecordDocketingCallbackMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:RecordDocketingMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:ReviewFilingCallbackMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:ServiceInformationQueryMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:ServiceInformationResponseMessage-4.0 urn:oasis:names:tc:legalxml-courtfiling:schema:xsd:ServiceReceiptMessage-4.0

Abstract:

This document defines the LegalXML Electronic Court Filing 4.01 (ECF 4.0) specification, which consists of a set of non-proprietary XML and Web services specifications, along with clarifying explanations and amendments to those specifications, that have been added for the purpose of promoting interoperability among electronic court filing vendors and systems. ECF Version 4.01 is a maintenance release to address several minor schema and definition issues identified by implementers of the ECF 4.0 specification.

Status:

This document was last revised or approved by the members 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.

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1 **1 Introduction**

2 This document is a specification developed by the OASIS LegalXML Electronic Court Filing Technical

3 Committee. It defines a technical architecture and a set of components, operations and message

4 structures for an electronic court filing system, and sets forth rules governing its implementation.

5 **1.1 Scope**

This specification describes the technical architecture and the functional features needed to accomplish a
successful electronic court filing system, and defines both the normative (required) and non-normative
(optional) business processes it supports. The non-functional requirements associated with electronic
filing transactions, as well as the actions and services needed to accomplish the transactions, such as
network and security infrastructures, are defined in related specifications, namely:

- Service interaction profile specifications that define communications infrastructures, within which
 electronic filing transactions can take place
- Document signature profile specifications that define mechanisms for stating or ensuring that a person signed a particular document
- 15
- 16 This specification supports the following automated information exchanges:
- Transmission of documents in electronic form from law firms and from other persons and organizations to a court for entry ("official filing") into the court's official case records
- Recording of documents in electronic form from members of the court and court administrators into the court's official case records
- Transmission of data needed to complete (or demonstrate the previous completion of) financial
 transactions involving filing fees or the payment of any other court fees, fines and financial obligations
- Transmission of the metadata needed to initiate a new case record in a court's automated case
 management system (CMS) when the document being transmitted is one that commences a new
 case in that court
- Transmission of the metadata needed to create an entry that records (indexes) a filed document in a court's electronic listing of cases and their contents (variously called a "docket" or "register of actions")
- Transmission of the metadata needed to update the information recorded about a case that is
 maintained in a court's CMS
- Messages returned to the sender that confirm a court's receipt of the sender's filing message
- Messages notifying the sender of events such as the entry of the document(s) submitted by the
 sender into the court record (or an error message stating that the document[s] could not be accepted
 for filing and stating the reason[s] why)
- Queries to the court seeking information about data and documents held within the court's official electronic records and the return of information in response to those queries
- Queries from filers for the court rules and requirements for electronic filing
- Queries by filers seeking from the court record system the names and addresses of parties in a case
 who must be served and whether by traditional or electronic means
- Transmission of copies of documents submitted for filing to the other parties in a case who are registered to receive service electronically

42

In addition to filing of court case documents, this specification supports "secondary service" – the delivery
 of copies of filed documents to persons who have already been made parties to a case. This

- 45 specification does NOT support "primary service," which entails the service of summonses, subpoenas,
- 46 warrants and other documents that establish court jurisdiction over persons, making them parties to a
- 47 case. Therefore, this specification does NOT support the following automated information exchanges:
- A query by a filer seeking from the court record system the names and addresses of parties in a new case who must be served to establish court jurisdiction over them in the new case
- Transmission of copies of or links to documents submitted for filing to any party in a new case or any newly added parties in an existing case
- 52
- 53 This specification defines a set of core structures that are common to most types of court filings and 54 defines specific structures that apply to filing documents in the following types of court cases:
- 55 Appellate
- 56 Bankruptcy
- Civil (including general civil, mental health, probate and small claims)
- 58 Criminal (both felony and misdemeanor)
- Domestic relations (including divorce, separation, child custody and child support, domestic violence and parentage, i.e., maternity or paternity)
- Juvenile (both delinquency and dependency)
- Violations (including traffic, ordinances and parking)
- 63
- 64 Although ECF 4.01 does not define data structure elements specific to other case types (e.g.,
- administrative tribunals), the basic structure will support other types of court filings and is extensible
- 66 through court-specific and case-type-specific extensions.

67 **1.2 Relationship to Prior Specifications**

- 68 Electronic Court Filing 4.0 superseded the LegalXML Electronic Court Filing 3.0, 3.01 and 3.1
- 69 specifications developed by the predecessor organizations to the OASIS Electronic Court Filing Technical
- 70 Committee. Those specifications were prepared for and approved by the COSCA/NACM Joint
- 71 Technology Committee as proposed standards.
- Relative to the ECF 3.0, 3.01 and 3.1 specifications, the ECF 4.0 and 4.01 specifications provide a number of enhancements including:
- Leveraging of the National Information Exchange Model ([NIEM]), a national standard for information sharing
- Leveraging of the updates to the OASIS Universal Business Language ([UBL]), for describing payments
- 78 The inclusion of the data elements needed for appellate cases
- 79

80 This specification does not assume that prior specifications will be deprecated. However, ECF 4.0 is not

backward-compatible and applications using the ECF 3.0, 3.01 and 3.1 specifications will not interoperate

- 82 successfully with applications using these specifications. This fact is indicated by the assignment of a
- 83 new major version number to the ECF 4.0 and 4.01 specifications.

84 **1.3 ECF Version 4.01**

85 ECF 4.01 is a maintenance release to address several minor schema and definition issues identified by

- implementers of the ECF 4.0 specification. All references in this document to ECF 4.0 apply to ECF 4.01
 as well. Relationship to other XML Specifications
- The ECF specification incorporates other existing, non-proprietary XML specifications wherever possible. In particular, the specification has dependencies on the **[NIEM]**, the **[UBL]** data library and the World

- 90 Wide Web Consortium (W3C) XML Digital Signatures specification. The terminology used in this
- 91 specification to describe the components of the ECF technical architecture conforms to the OASIS 92 Reference Model for Service Oriented Architecture.
- 93
- It is recommended that implementations cache external schemas locally to improve performance and 94 reliability. (The alternative would be to rely on the external schemas as they are, in someone else's
- control, and assume they will not be changed or become hard to access due to Internet or network 95
- 96 problems.) The copies of external schemas that are cached in this way should be updated and refreshed
- 97 often to ensure changes will be quickly learned and addressed.

1.3.1 National Information Exchange Model (NIEM) 98

99 [NIEM] conformance, as defined by the NIEM Implementation Guidelines ([NIEM Guide]), is a core

- objective of this specification. The [NIEM] is an XML standard designed specifically for justice information 100
- 101 exchanges, providing law enforcement, public safety agencies, prosecutors, public defenders and the 102 judicial branch with a tool to effectively share data and information in a timely manner. The [NIEM]
- 103 provides a library of reusable components that can be combined to automate justice information
- exchanges. The [NIEM] removes the burden from agencies to independently create exchange 104
- standards. Because of its extensibility, there is more flexibility to deal with unique agency requirements 105
- and changes. Through the use of a common vocabulary that is understood system to system, [NIEM] 106
- 107 enables access from multiple sources and reuse in multiple applications. The use of [NIEM] element
- 108 names does not require any change in local legal terminology. XML tag names are invisible to the user of 109 an application employing them.
- 110 The [NIEM] is most useful for describing common objects such as persons and locations, and criminal
- 111 justice-specific processes such as arrest, booking, jail and prosecution. The [NIEM] is not as well

112 developed for describing non-criminal information exchanges and processes. ECF 4.0 uses the [NIEM]

- version 2.0 where the structures and definitions correspond to the requirements of ECF 4.0. The 113
- 114 development process, including the **[NIEM]** modeling process, is described in Appendix B.

1.3.2 OASIS Universal Business Language 115

- 116 [UBL] is an OASIS Standard that provides a single ubiquitous language for business communication, and
- 117 takes into account the requirements common to all enterprises. [UBL] provides a shared library of
- 118 reusable components, essential to interoperability that can be combined to create electronic business

119 schemas. Without a common set of base components, each document format would risk redefining addresses, locations and other basic information in incompatible ways.¹

- 120
- ECF 4.0 employs the following structures in the [UBL] to describe filing payments and payment receipts: 121
- 122 <AllowanceCharge>
- 123 Information about a charge or discount price component.
- 124 <Address>
 - Information about a structured address.
- 126 <Payment>

125

127

Information directly relating to a specific payment.

http://www.oasisopen.org/committees/download.php/1023/UBL%3A%20The%20Next%20Step%20for%20Global%20E-Commerce

128 1.3.3 W3C XML-Signature Syntax and Processing

- 129 The W3C XML Signature Syntax and Processing (**[XMLSIG]**) specification describes a mechanism for
- 130 signing electronic documents. This mechanism allows recipients of electronic documents to identify the
- sender and be assured of the validity of the electronically transmitted data. **[XMLSIG]** defines standard
- means for specifying information content that is to be digitally signed.
- 133 ECF 4.0 employs the **[XMLSIG]** specification to describe digital signatures applied to the entire ECF 4.0
- 134 message transmission in order to provide authentication, encryption and message integrity. **[XMLSIG]** is
- also used in the ECF 4.0 XML Document Signature Profile.

136 **1.3.4 OASIS Reference Model for Service Oriented Architecture**

137 The **[SOA-RM]** is a framework for understanding significant entities, and the relationships between those 138 entities, within a service-oriented architecture. ECF 4.0 describes such an architecture and includes 139 terminology that conforms to the **[SOA-RM]**.

140 **1.3.5 OASIS Code List Representation (Genericode)**

- 141 The OASIS Code List Representation format, [Genericode], is a model and XML schema that can be
- used to encode a broad range of code list information. The XML format is designed to support
- 143 interchange or distribution of machine-readable code list information between systems. All ECF 4.0 code
- lists that are not defined in the NIEM are provided in [Genericode] 1.0 format.
- 145

146 **1.4 Terms and Definitions**

147 The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD

- 148 NOT", "RECOMMENDED", "MAY" and "OPTIONAL" in this document are to be interpreted as described 149 in [RFC2119].
- 150
- 151 This section defines key terms used in this specification.
- 152

153 Attachment

154 See definition in Section 2.3.2.

155 Callback message

156A message transmission returned by some operations some time after the operation was invoked157(asynchronously).

158 Document

- 159 An electronic equivalent of a document that would otherwise be filed on paper in a traditional, 160 non-electronic fashion.
- 161 Document hash

² http://xml.coverpages.org/xmlSig.html

162 A condensed representation of a document intended to protect document integrity, calculated 163 according to the FIPS 180-2 SHA 256 algorithm.

164 Docketing

165 The process invoked when a court receives a pleading, order or notice, with no errors in 166 transmission or in presentation of required content, and records it as a part of the official record.

167 Filer

168 An attorney or a *pro se* (self-represented) litigant acting as an individual who assembles and 169 submits one or more filings (combinations of data and documents).

170 Filing

171 An electronic document (with any associated data, attachments and the like) that has been 172 assembled for the purpose of being filed into a specified court case.

173 Hub Service MDE

A centralized Service MDE capable of receiving a single set of service notifications for all parties
 registered for electronic service in a case and transmitting the service notifications to the Service
 MDEs registered to each party in the case.

177 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, returning a synchronous response
 message (a reaction to a message received) and, optionally, returning an asynchronous (later)
 response message to the originating message sender.

182 Message

183 See definition in Section 2.3.1.

184 Message Transmission

185 The sending of one or more messages and associated attachments to an MDE. Each 186 transmission must invoke or respond to an operation on the receiving MDE, as defined in the 187 ECF 4.0 specification.

188 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 request with an operation identifier and a set of
 messages.

193 **Operation signature**

A definition of the input message 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.

197 Synchronous response

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

200 1.5 Symbols and Abbreviations

- 201 This section defines key symbols and abbreviations used in this specification.
- 202
- 203 ECF 4.0
- 204 Electronic Court Filing 4.0
- 205 **IEPD**

| 206 | | Information Exchange Package Documentation |
|-----|-------|--|
| 207 | MDE | |
| 208 | | Major Design Element |
| 209 | NIEM | |
| 210 | | National Information Exchange Model |
| 211 | OASIS | |
| 212 | | Organization for the Advancement of Structured Information Standards |
| 213 | XML | |
| 214 | | eXtensible Markup Language |
| 215 | W3C | |
| 216 | | World Wide Web Consortium |
| 217 | WS-I | |
| 218 | | Web Services Interoperability Organization |
| 219 | | |

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307 2 ECF 4.0 Architecture

308

The ECF 4.0 architecture consists of four Major Design Elements (MDEs), which support operations and messages. An MDE is a logical grouping of operations, such as the operations involved in creating a filing or the operations involved in receiving and recording a filing, that is, incorporating the constituent documents into a court document management system. A message is the data exchanged between MDEs in the form of an XML document that may include one or more additional binary attachments. These messages contain the information to be filed with the court. This section describes the ECF 4.0 architecture including the MDEs, the operations and the messages.

316 2.1 Core vs. Profiles

- 317 The ECF 4.0 architecture can be divided into three principal elements:
- Core Specification This core specification defines the MDEs and the operations and messages
 that are exchanged between MDEs.
- Service Interaction Profiles Service interaction profiles are specifications that describe communication infrastructures that deliver messages between MDEs.
- Document Signature Profiles Document signature profiles are specifications that describe
 mechanisms for signing electronic documents.
- In order to be compliant, an implementation of the ECF specification MUST implement the core specification and at least one service interaction profile and one document signature profile.
- The MDEs and messages that make up the core specification are discussed in Sections 2.2 and 2.3 below, respectively. Service interaction profiles are discussed in Section 5 below. Document signature profiles are discussed in Section 6 below.

329 **2.2 Major Design Elements**

- 330 ECF 4.0 defines four MDEs. They are:
- **Filing Assembly MDE** enables a filer to create a filing message for submission to a court, and for service on other parties in the case, returning a response from the court to the filer.
- Filing Review MDE enables a court to receive and review a filing message and prepare the
 contents for recording in its case management and document management systems, sending a
 response concerning the filing to the Filing Assembly MDE. The Filing Review MDE also enables
 filers to obtain court-specific policies regarding electronic filing and to check on the status of a filing.
- Court Record MDE enables a court to record electronic documents and docket entries in its case management and document management systems and returns the results to the Filing Review MDE. The Court Record MDE also enables filers to obtain service information for all parties in a case, to obtain information about cases maintained in the court's docket, register of actions and calendars, and to access documents maintained in the court's electronic records.
- Legal Service MDE enables a party to receive service electronically FROM other parties in the case. Note that service TO other parties in the case is performed by the Filing Assembly MDE.
- The MDEs defined in the ECF 4.0 specifications are meant only to define the "interface" to each operation; the specification is not intended to define how operations must be implemented. This strategy allows MDE implementations to interoperate while leaving room for vendors and courts to have differing implementations (e.g., an implementation that supports a particular CMS).
- 348 An ECF 4.0-compliant implementation may implement one or more of the MDEs defined in the
- 349 specification but a complete ECF 4.0 system MUST include at least one each of the Filing Assembly,
- 350 Filing Review and Court Record MDEs. For instance, a court may decide to provide certain MDEs and

- court, vendor or application, the application MUST maintain the ECF 4.0 specified operations between
 each MDE so that other applications will be able to interoperate with it.
- 354 Each of the operations supported by an MDE accepts one or more messages as input and returns an

immediate, synchronous response message to the calling MDE. For some operations, the MDE will also return an asynchronous (callback) message at a later time that reports the result of a business process implemented within the MDE. In order to be compliant with ECF 4.0, an MDE must support all messages required for that MDE. However, in an ECF 4.0 system that does not support electronic service, the operations associated with the Legal Service MDE are not required.

- 359 operations associated with the Legal Service MDE are not required.
- 360 An MDE defines an information model and behavior model of a service as described in the [SOA-RM].
- 361 One must remember that "service" in the service oriented architecture sense is not the same as the
- 362 business function of "service of filing" used throughout in this document.

363 2.3 Information Model

The ECF information model describes the messages that may be exchanged between MDEs. All ECF 4.0 operations use the same core message stream structure, which is implemented in the service interaction profiles. Each ECF core message stream is a stream of bytes that contains at least one

367 message and may also contain attachments.

368 **2.3.1 Messages**

A message is an XML document that is a well-formed XML data structure with a single root element that is transmitted between MDEs and is valid as defined by one of the defined message structure schemas in the ECF 4.0 specification. A message may be related to one or more attachments. A message contains the following information:

- Message information about the filing and court case, such as identifiers for the sender and receiver,
 the sending and receiving MDEs, and the submission date and time, typically a composition of:
- A core message which includes basic information common to all courts and case types and
 Information about each of the documents associated with the message
- 377 Case-type-specific extensions that includes information appropriate only for a particular type of
 378 filing
- 379 Court-specific extensions that includes information appropriate only for cases in a particular court
- 380 Information about each of the documents associated with the message. A document in this sense is • the electronic representation of what would be recognized as a "document" if it were a single, whole, 381 382 physical paper object. This includes both a lead document, one that will be placed on the court's 383 register of actions (docketed, indexed) and any supporting document(s), which are present to 384 supplement the lead document in some way. The message includes the document's metadata, for 385 example, its title, type, identifier, parent document identifier and document sequence number. Each 386 document structure may reference one or more attachments, including attachment identifiers and 387 sequence numbers. When included in attachments, a logical document MAY be split into several 388 physical parts if necessary to satisfy a court requirement regarding maximum document size. The actual binary encoded electronic document MAY be either included in one or more attachments to the 389 390 message or embedded in the message using the following structure:

| 391 | <filingleaddocument> (or <filingconnecteddocument>)</filingconnecteddocument></filingleaddocument> |
|------------|--|
| 392 | <ecf:documentrendition></ecf:documentrendition> |
| 393 | <documentrenditionmetadata></documentrenditionmetadata> |
| 394 | <documentattachment></documentattachment> |
| 395 396 | <binarybase64object>2345klj345h<binarybase64object></binarybase64object></binarybase64object> |
| 397 | |
| 398 | |
| 399 | |

- 400 </FilingLeadDocument> (or </FilingConnectedDocument>)
- 401

Elements defined by this specification, whether in core messages, case type-specific extensions or court-402 403 specific extensions, are intended to be useful to an automated case management system for the 404 purposes of partially or fully automating case workflow after filing (e.g., filing review, noticing, docketing, 405 judicial assignment, calendaring, standardized forms receipt and generation, fee processing) or 406 ascertaining the adequacy or appropriateness of the filing (e.g., fee or fine calculation, jurisdiction). Elements defined by this specification are not intended to fully populate the automated case management 407 408 system with all data contained within filed documents. That is, these elements should be useful as "filing metadata" about the case, the filing transaction, parties or documents. These elements may also be "filing 409 data", or the contents of the filings. For instance, information found on a filing cover sheet can generally 410 be considered filing metadata, even if the information is also repeated in the document(s) being filed. 411 412

- 413 The scope of the ECF core messages and extensions is limited by the following criteria:
- Elements in the ECF core messages should be applicable to most courts and case types
- Elements in the ECF case-type-specific extensions should only be applicable to one of the seven case types defined in National Center for State Courts (NCSC) statistical standards
- Elements in locally-defined court-specific extensions should only be applicable to a particular court or court system but not to courts in general
- 419 All "filing data" elements should be described in the filed documents, whose structure is outside the scope 420 of the ECF specification.

421 **2.3.2 Attachment**

An attachment is a series of bytes in the message stream transmitted between MDEs that constitutes, in whole or in part, an electronic document whose conventional equivalent would be a document on paper. The contents are preceded by one or more "headers" that uniquely identify the attachment (using a content identifier) and specify the format or type of the attachment. Note that the contents of an attachment can be binary octets (the "raw" binary data of the document), binary data encoded in text

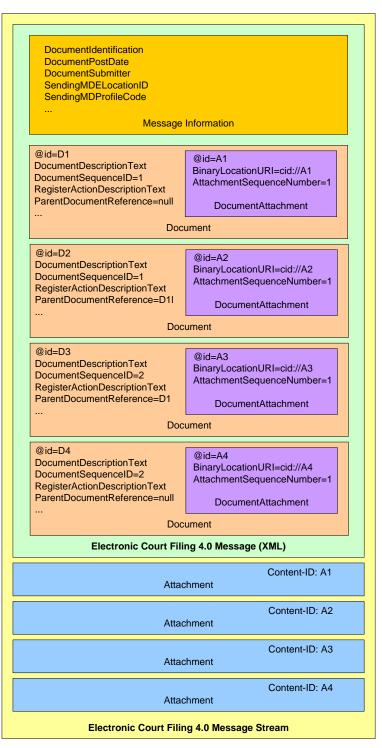
- 427 (e.g., via base-64 or some other algorithm), XML text or plain text.
- 428 Attachments appear in the message stream after the messages. The order of attachments within the 429 message stream is not important and cannot be treated as significant. In particular, this means that the 430 series of bytes representing the content of a lead document need not appear before the attachments
- 431 representing the content of documents supporting that lead document.

432 **2.3.3 Sample Message Streams**

- 433 The following conceptual diagrams illustrate the containment structures involved in the message stream.
- 434
- 435

436

- Figure 1 illustrates a message stream involving two lead documents, the first of which has two supporting
 documents. The second lead document has no supporting documents. Each document is associated
- 439 with a single attachment.
- 440





442 443

Figure 1. Simple Message Stream

444

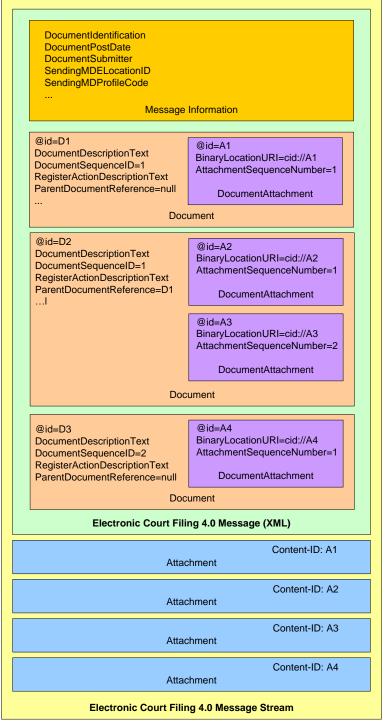
445 Figure 2 illustrates a message stream involving two lead documents, the first of which has a single

supporting document. The second lead document has no supporting documents. The supporting

document associated with the first lead document is split into two pieces, each treated as an attachment,

presumably due to limits set by the court on size. Each lead document is associated with a single

449 attachment, and the one supporting document is associated with two attachments.





451 452

Figure 2. Message Stream with a Document in Multiple Attachments

453 **2.4 Court Policy**

A court's customary practices may influence many aspects of its ECF 4.0 implementation, and those local practices and variations are expressed through the "court policy" component of e-filing, which includes:

- Human-readable court policy a textual document publishing the court's rules and requirements for
 electronic filing.
- Machine-readable court policy an ECF 4.0 message that describes the features of the ECF 4.0 implementation supported by this specification, the court's code lists and any other information a
 Filing Assembly MDE would need to know in order to successfully submit an electronic filing into that court.
- 462 The court MUST have only one active, authoritative version of its policies at a given time; both the 463 human-readable and the machine-readable statements of those policies MUST have the same release 464 dates for the court.
- 465 The court's human-readable and machine-readable court policies MUST each have a version numbering
- 466 method associated with it. The court's versioning process SHOULD comply with the following rules: 1)
- 467 Versions are denoted using a standard triplet of integers: MAJOR.MINOR.PATCH; 2) Different MAJOR
- versions are to be considered incompatible, large-scale upgrades of the Policy; 3) Different MINOR
- 469 versions are to be considered to retain source and binary compatibility with earlier minor versions, and
- 470 changes in the PATCH level are perfectly compatible, forward and backward. It is important to note that a 471 policy that has not reached version 1.0.0 is not subject to the guidelines described in this document.
- 471 policy that has not reached version 1.0.0 is not subject to the guidelines described in this document. 472 Before a 1.0 release is achieved (i.e., any version numbered 0.x.y), court policy can be changed freely
- 473 without regard to the restrictions on compatibility between versions.
- 474 Court policy is not directly equivalent to "service policy" in the **[SOA-RM]**. However, thinking about court
- 475 policy from a policy assertion, policy owner and policy enforcement framework as described in the [SOA-
- 476 **RM]** is helpful. Note that "court policy" refers to a set of constituent rules and requirements, while the
- 477 **[SOA-RM]** looks at each individual item as a "service policy." In all cases the policy owner is the court
- 478 where the document is to be filed. Also note that none of the elements of court policy rise to the level of a
- 479 "service contract" as defined by the [SOA-RM].

480 2.4.1 Human-Readable Court Policy

- To be compliant with the ECF 4.0 specification, each court MUST publish a human-readable court policy
 that MUST include each of the following:
- 483 1. The unique court identifier
- 484 2. The location of the machine-readable court policy
- 485 3. A definition of what constitutes a "lead document" in the court
- 486486487<l
- 488 5. A description of how the court processes (dockets) filings
- 489
 6. A description of any instances in which the court will mandate an element that the ECF 4.0 schema makes optional
- 491 7. A description of any restrictions to data property values other than code list restrictions. (This
 492 restriction may be removed in later versions of the ECF specification)
- 493 8. Any other rules required for electronic filing in the court

494 **2.4.2 Machine-Readable Court Policy**

- 495 Machine-readable Court Policy includes structures for identifying run-time and development-time policy496 information.
- 497 Run-time information includes information that will be updated from time to time, such as code lists (e.g.,
- 498 acceptable document types, codes for various criminal charges and civil causes of action) and the court's
 499 public key for digital signatures and encryption.

- 500 Development-time information includes court rules governing electronic filing that are needed at the time 501 an application is developed but which are not likely to change. These include:
- 502 1. The service interaction profile(s) that the court supports
- 503 2. The MDEs, query operations and case types supported by the court's ECF 4.0 system
- 3. Whether a court will accept the filing of a URL in lieu of the electronic document itself
- 505 4. Whether the court accepts documents requiring payment of a filing fee
- 506 5. Whether the court accepts electronic filing of sealed documents
- 507 6. Whether the court accepts multiple (batch) filings
- 508 7. The court-specific extensions to the ECF 4.0 specification, including the required elements (see509 below)
- 510 8. The maximum sizes allowed for a single attachment and a complete message stream
- 511 The machine readable court policy MUST be provided to the Filing Assembly MDE either by the Filing
- 512 Review MDE through the GetCourtPolicy query or some other means.

513 **2.4.3 Case-Type and Court Extensions**

- 514 Schemas for initiating specific case types (e.g. criminal, civil) are included in the specification. Case-type
- and court-specific extensions to the ECF core messages are implemented through the methods
- 516 described in **[NIEM Techniques]**. The primary extension technique is the use of element substitution, as
- 517 described in Section 5.3.3 of **[NIEM Techniques]**, in which a more specific element defined in a case-
- 518 type or court-specific extension is used in place of a generic element in a core message. For instance, a
- court may add elements required for a particular case type (e.g. civil) by defining an extension schema
 that includes types (e.g. court:CivilCaseType) and elements (e.g., court:CivilCase) that
- 521 substitute for ECF types (e.g. civil:CivilCaseType) and elements (e.g., civil:CivilCase).
- 522 Similarly, an implementation may substitute a court-specific code list for a generic code list defined in this 523 specification.
- 525 s

525 2.4.4 Court-Specific Code Lists

526 Code lists are used to constrain the allowable values for certain information in an ECF 4.0 message. The 527 court SHOULD publish **[Genericode]** 1.0 code lists for each of the following code lists and reference 528 each of these code lists in its court policy:

529

532

533

537

539

- 530 ECF Code Lists
- Civil Case Type
 - <FiduciaryTypeCode>*
 - <JurisdictionalGroundsCode>
- <ReliefTypeCode>
- Domestic Case Type
- 536 <NoContactCode>*
 - <RequestToVacateCode>
- 538 Common Types
 - <AliasAlternateNameTypeCode>*
- 540 <CaseAssociationTypeCode>*
- 541 <CaseOfficialRoleText>*
- 542 <CaseParticipantRoleCode>*

| 543 | • <causeofactioncode></causeofactioncode> |
|------------|--|
| 544 | <courteventtypecode></courteventtypecode> |
| 545 | EntityAssociationTypeCode> |
| 546 | • <errorcode>*</errorcode> |
| 547 | Juvenile Case Type |
| 548 | <delinquentactapplicabilitycode></delinquentactapplicabilitycode> |
| 549 | <pre>• <delinquentactdegreecode></delinquentactdegreecode></pre> |
| 550 | <pre>• <delinquentactseveritycode></delinquentactseveritycode></pre> |
| 551 | <delinquentactspecialallegationcode></delinquentactspecialallegationcode> |
| 552 | • <dependencyallegationcode></dependencyallegationcode> |
| 553 | <guardianassociationtypecode>*</guardianassociationtypecode> |
| 554 | <pre> <placementtypecode> </placementtypecode></pre> |
| 555 | NIEM Code Lists |
| 556 | • JXDM |
| 557 | <chargeenhancingfactortext></chargeenhancingfactortext> |
| 558 | <courtlocationcode></courtlocationcode> |
| 559 | <registeractiondescriptiontext></registeractiondescriptiontext> |
| 560 | <statutecodeidentification></statutecodeidentification> |
| 561 | <statutecodesectionidentification></statutecodesectionidentification> |
| 562 | <statuteoffenseidentification></statuteoffenseidentification> |
| 563 | <statusoffensecodeidentification></statusoffensecodeidentification> |
| 564 | NIEM Core |
| 565 | • <binarydescriptiontext>*</binarydescriptiontext> |
| 566 | • <casecategorytext></casecategorytext> |
| 567 | <driverlicensecommercialclasscode></driverlicensecommercialclasscode> |
| 568 | <familykinshipcode>*</familykinshipcode> |
| 569 | |
| 570 571 | A non-normative [Genericode] code list with default values is provided for each of the code lists above with asterisks (*). |
| 572 | |
| 573 | If a court does not define allowable values for any of the above code lists in court policy, then any value |
| 574 | MUST be considered acceptable for that code. |
| 575 | |
| 576 | 2.4.5 Court-Specific Constraint Schemas |

577 The cardinality of elements in the NIEM subset imported by the ECF is applied through the use of 578 constraint schemas that define the minimum and maximum occurrence of elements in the NIEM subset. 579 Courts MAY enforce court-specific rules and code lists by creating court-specific constraint schemas. 580 This process creates a duplicate set of the ECF schemas and allows the customization of the cardinality 581 of elements as needed. If court-specific constraint schemas are used, instance documents MUST 582 validate against both the ECF schemas and the court constraint schemas.

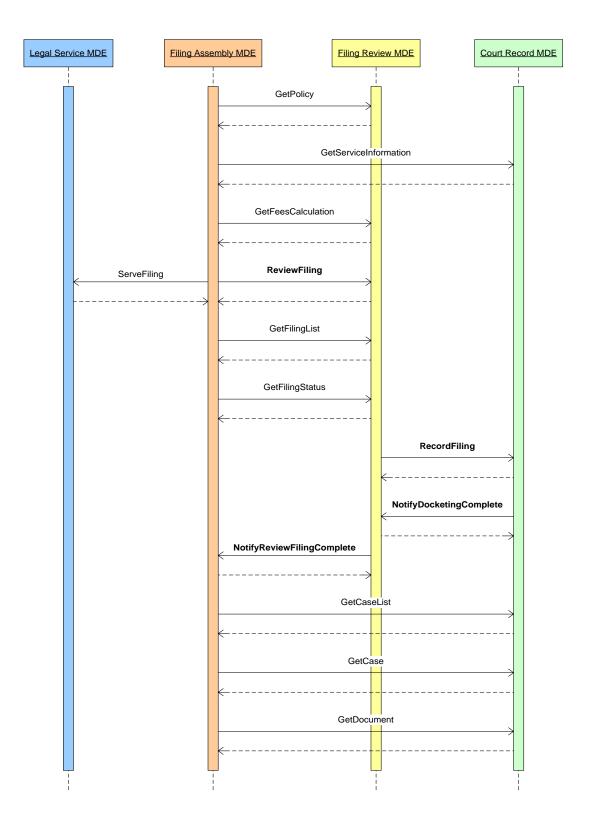
583 3 ECF 4.0 Process Model

584 This section details the interactions of the ECF 4.0 MDEs and the role of each MDE in the electronic filing 585 and electronic service processes. This section also enumerates the operations provided by each MDE 586 and points to the operations, provided by other MDEs, that each MDE consumes.

587 3.1 The Filing-Preparation-to-Docketing Process Model

588 This model describes the sequence of operations in a basic filing cycle from Filing Preparation to 589 Docketing. This model involves three parties: a Filer (represented by the Filing Assembly MDE), a Court 590 (represented by the Filing Review and Court Record MDEs) and a Service Recipient (represented by the 591 Legal Service MDE). The operations defined by ECF 4.0 to support the processes in this cycle are listed 592 below. The operations in bold are required and MUST occur in every successful filing as long as sending 593 and receiving MDEs are implemented. The other operations are optional and MAY occur within a given 594 filing:

- 595 GetPolicy
- 596 GetServiceInformation
- 597 GetFeesCalculation
- 598 ReviewFiling
- 599 ServeFiling
- 600 RecordFiling
- 601 NotifyDocketingComplete
- 602 NotifyFilingReviewComplete
- At any point during or after the ReviewFiling operation, if the filing is accessible, a party MAY access information through the following operations:
- 605 GetFilingList
- 606 GetFilingStatus
- 607 At any point after the NotifyFilingReviewComplete operation, if the case is accessible, a party MAY 608 access information through the following operations:
- 609 GetCaseList
- 610 GetCase
- 611 GetDocument
- 612 These operations are depicted in the sequence diagram below. The solid lines indicate invoked
- operations and the dashed lines indicate the synchronous responses to those operations.
- 614



618 3.2 Business Rules

- This section describes the business rules of the generic filing-preparation-to-docketing process that govern the ECF 4.0 operations.
- 621 ECF 4.0 includes an <ecf:ErrorCode> element for returning errors in response to a query request.
- 622 Successful queries MUST return an <ecf:ErrorCode> of "0". Failed queries MUST NOT return an
- 623 <ecf:ErrorCode> of "0" and SHOULD return an appropriate <ecf:ErrorCode> value as defined in
- 624 court policy.

625 **3.2.1 GetPolicy**

The Filing Assembly MDE MAY obtain a court's machine-readable court policy at any time by invoking the GetPolicy operation on the Filing Review MDE with the identifier for the court. The Filing Review MDE returns the machine-readable court policy in a synchronous response. The content of the machinereadable court policy is described in Section 2.4.2. This step may be omitted if the Filing Assembly MDE already has the current court policy.

631 **3.2.2 GetServiceInformation**

The Filing Assembly MDE MAY obtain the Court's service information for all parties in an existing case at any time by invoking the GetServiceInformation operation with the appropriate case number on the Court

634 Record MDE. The service list returned by the GetServiceInformation operation assists the filer in

635 maintaining the filer's service list and is not a substitute for the filer's service list. To provide this

- 636 information, the Court Record MDE MUST have access to the court's registry with all updated information
- about case participants. There MUST be only one such registry per court, though multiple courts MAY
 share the same registry. The Court Record MDE responds synchronously to the Filing Assembly MDE
- with a service list reflecting the most current contact information available to the court, which is necessary to complete secondary service, whether electronically or by other means.
- 641 If the court provides a Hub Service MDE, the electronic service information returned from this query 642 MUST include the court's Service MDE ID for all case participants who have one.
- 643 A party to a case is always the official target of service. In practice, the system will actually deliver to pro 644 se litigants and to attorneys as intermediaries.
- 645 The duty to complete secondary service is upon the filer, and not the court, except when the court is the 646 filer.
- 647 The GetServiceInformation operation returns a service list current as of the transaction. No assumption
- 648 can be made that the data returned by the operation will remain current for use at any future point in time.

649 3.2.3 GetFeesCalculation

650 The Filing Assembly MDE MAY query for the fees associated with a filing by invoking the MDE's

- 651 GetFeesCalculation operation, with a filing as a parameter, on the Filing Review MDE. The Filing Review
- 652 MDE responds synchronously with the fee calculation and, optionally, a list of the included charges. This 653 step may be omitted if there are no fees associated with filings in the court or the calculated fees are
- 654 already known.

655 3.2.4 ReviewFiling

The Filing Assembly MDE MUST submit the filing to the court by invoking the ReviewFiling operation on the Filing Review MDE. The ReviewFiling operation includes messages for the core filing, including the case type-specific and court-specific extensions and the filing payment. The Filing Review MDE

responds synchronously with a receipt message that includes the filing identifier issued by the court.

660 **3.2.5 ServeFiling**

661 At approximately the same time the Filing Assembly MDE submits the filing to the court, the Filing 662 Assembly MDE MAY serve the entire filing, to other parties in the case by invoking the ServeFiling

- 663 operation on the ServiceMDE associated with the service recipient. This operation MUST NOT be used
- 664 to serve parties in a new case or to persons or organizations that have not yet been made party to the 665 case. The Legal Service MDE responds synchronously with an acknowledgement that the message will
- 666 be delivered to the service recipient or with an error.
- 667 If the court hosts a hub Service MDE, the Filing Assembly MDE MAY send a message to the hub Service
- 668 MDE's ServeFiling operation. The hub Service MDE MUST then broadcast the message to each of the 669
- individual Legal Service MDE's ServeFiling operations and respond synchronously with a single
- 670 ServiceResponseMessage to the Filing Assembly MDE, conveying the results of each individual service 671 transaction.
- 672 If a court chooses to support electronic service, then each Filing Assembly MDE MUST support service
- 673 operations for the clients for which it provides Filing Assembly functionality.

3.2.6 RecordFiling 674

- 675 If the clerk reviews and accepts the filing, the Filing Review MDE MUST invoke the RecordFiling
- operation on the Court Record MDE. The RecordFiling operation includes information from the 676
- 677 ReviewFiling operation with any modifications or comments by the clerk. The Court Record MDE
- 678 responds synchronously with an acknowledgement of the request.

3.2.7 NotifyDocketingComplete 679

680 The Court Record MDE MUST invoke the NotifyDocketingComplete operation on the Filing Review MDE 681 as a callback message to the RecordFiling operation to indicate whether the filing was accepted or 682 rejected by the court record system. If the Court Record MDE rejected the filing, an explanation MUST be provided. If the Court Record MDE accepts the filing, the docketing information (e.g. date and time the 683 684 document was entered into the court record, judge assigned, document identifiers and next court event 685 scheduled) MUST be provided. The Filing Review MDE responds synchronously with an 686 acknowledgement of the callback message.

3.2.8 NotifyFilingReviewComplete 687

- 688 If the clerk rejects the filings or the Filing Review MDE receives the Notify Docketing Complete message,
- 689 the Filing Review MDE MUST invoke the NotifyFilingReviewComplete operation on the Filing Assembly 690 MDE as a callback message to the ReviewFiling operation to indicate whether the filing was accepted
- 691 and docketed by the clerk and court record system. The operation MAY return the filed documents or 692 links to the documents, but MUST include the [FIPS 180-2] SHA 256 document hash, a condensed 693 representation of a document intended to protect document integrity.
- 694 If the filing included a payment, and the filing was accepted by the clerk and court record system, a 695 receipt for the payment MUST be included in the operation. The Filing Assembly MDE responds
- 696 synchronously with an acknowledgement of the callback message.

3.2.9 GetFilingList 697

- 698 The Filing Assembly MDE MAY invoke the GetFilingList query operation on the Filing Review MDE to
- 699 return a list of filings matching several criteria including the filer identifier, the case number and the filed date within a certain time range. The Filing Review MDE responds synchronously with a list of matching 700
- 701 filings and the status of each filing.

3.2.10 GetFilingStatus 702

The Filing Assembly MDE MAY invoke the GetFilingStatus query operation with the filing Identifier on the 703 Filing Review MDE to return the status of the selected filing. The Filing Review MDE responds 704

705 synchronously with the matching filing and the status of the filing.

706 **3.2.11 GetCaseList**

The Filing Assembly MDE MAY invoke the GetCaseList query operation on the Court Record MDE to return a list of cases matching several criteria including case number, case participant, or the filed date

over a specific time range. The Court Record MDE responds synchronously with a list of matching cases.

710 3.2.12 GetCase

711 The Filing Assembly MDE MAY invoke the GetCase query operation with a case number on the Court

712 Record MDE to return information about the case including the case participants, court docket and

713 calendar events. The Filing Assembly MDE may also limit the amount of case detail returned from the

714 Court Record MDE by using a set of filters. The Court Record MDE responds synchronously with the

715 selected case information.

716 **3.2.13 GetDocument**

The Filing Assembly MDE MAY invoke the GetDocument query operation, including the case number and
 document number, on the Court Record MDE to retrieve a particular document from a case. The Court
 Record MDE will respond synchronously with the requested document or instructions on how to access it.

720 **3.3 Message Business Rules**

Each operation includes one or more messages as parameters. The following business rules apply to the content of ECF 4.0 messages:

723 3.3.1 Identifiers

Identifiers are used to uniquely label people, organizations and things in the ECF 4.0 process. Thefollowing conventions will be used to produce identifiers.

726 3.3.1.1 Attachment Identifiers

Attachment identifiers MUST be unique within a message transmission. A convention for assigning
 identifiers to each message and attachment in a message transmission has to be defined in each service
 interaction profile.

730 **3.3.1.2 Case Identifiers**

Case identifiers (case numbers) are assigned by the court record system and MUST be unique within acourt.

733 3.3.1.3 Court Identifiers

Court identifiers are locally assigned by the court administrator for a region (typically a state, provincial or
 federal court administrator) and MUST be universally unique to a court but not necessarily to a particular
 court house, branch or subunit of a court. Court identifiers MUST conform to following convention:

737 <Internet domain of the court administrator>:<unique identifier within the court system>.

- 738 Examples of conformant court identifiers include:
- 739 courts.wa.gov:superior.king
- 740 nmcourts.com:albd.civil
- uscourts.gov:100
- 742 courts.gov.bc.ca:appeal
- 743 These are strictly examples and do not necessarily indicate actual courts.

3.3.1.4 Document Identifiers 744

745 Document identifiers are assigned by the court record system and MUST be unique within a court.

3.3.1.5 Filing Identifiers 746

747 Filing identifiers MUST be unique within a court and will be generated by the court in response to a ReviewFiling operation. 748

3.3.1.6 MDE Identifiers 749

750 The address of an MDE MUST be unique within a given communications infrastructure. The convention for defining MDE identifiers will be defined in each service interaction profile. 751

3.3.1.7 Filer and Party Identifiers 752

753 Identifiers for filers and parties to a case, both persons and organizations, MUST be unique within a case 754 and will be generated by the court in response to a ReviewFiling operation. The following is a non-755 normative example of an identifier for filer number 100:

- 756
- 757 <nc:PersonOtherIdentification>
- 758 <nc:IdentificationID>100<nc:IdentificationID>
- 759 <nc:IdentificationCategoryText>ECFFilerID</nc:IdentificationCategoryTex 760 t>
- 761 </nc:PersonOtherIdentification>
- 762
- 763 In addition to <nc: PersonOtherIdentification>, other elements that may contain a filer identifier 764 include <nc:OrganizationOtherIdentification>, <ecf:FilingPartyID> and
- 765 <ecf:FilingAttorneyID>.

766 Attorneys MAY reference the parties they represent with party identifiers. Self-represented litigants MAY 767 be represented using both attorney and party elements for the same individual, with a reference from the attorney element to the party element. The attorney elements for a self-represented litigant SHOULD 768

NOT include a bar number. 769

3.3.2 Code Lists 770

771 Code Lists are used to constrain the allowable values for certain information in a message. The following normative code lists are normative for all ECF 4.0 implementations. Court-specific code lists are listed in 772 Section 2.4.4. 773

- 774
- ECF Code Lists 775 •
- 776 Bankruptcy Case Type 777 <DebtorTypeCode>* • 778 <EstimatedAssetsValueLevelCode>* . 779 <EstimatedDebtsValueLevelCode>* 780 <NatureOfDebtCode>* • 781 <NumberOfCreditorsValueLevelCode>* • 782 Common Types • 783 <FilingStatusCode>* ٠
- 784 Court Policy Response Message

| 785 | <majordesignelementnamecode></majordesignelementnamecode> |
|------------|---|
| 786 | <pre>• <operationnamecode></operationnamecode></pre> |
| 787 | Service Receipt Message |
| 788 | • <servicestatuscode>*</servicestatuscode> |
| 789 | NIEM Code Lists |
| 790 | ANSI NIST |
| 791 | <pre>• <fingerpositioncode></fingerpositioncode></pre> |
| 792 | • JXDM |
| 793 | • <chargenciccode></chargenciccode> |
| 794 | • <drivingincidenthazmatcode></drivingincidenthazmatcode> |
| 795 | <drivingjurisdictionauthoritynciclstacode></drivingjurisdictionauthoritynciclstacode> |
| 796 | <identificationjurisdictionncicliscode></identificationjurisdictionncicliscode> |
| 797 | <warrantextraditionlimitationcode></warrantextraditionlimitationcode> |
| 798 | NIEM Core |
| 799 | • <documentlangagecode></documentlangagecode> |
| 800 | • <driverlicensecommercialclasscode></driverlicensecommercialclasscode> |
| 801 | <drivingrestrictioncode></drivingrestrictioncode> |
| 802 | • <languagecode></languagecode> |
| 803 | • <lengthunitcode></lengthunitcode> |
| 804 | <locationcountryfips10-4code></locationcountryfips10-4code> |
| 805 | • <locationcountycode></locationcountycode> |
| 806 | <locationstateuspostalservicecode></locationstateuspostalservicecode> |
| 807 | <personcitizenshipfips10-4code></personcitizenshipfips10-4code> |
| 808 | <pre> <personethnicitycode> </personethnicitycode></pre> |
| 809 | <pre> <personeyecolorcode> </personeyecolorcode></pre> |
| 810 | <pre> <personhaircolorcode> </personhaircolorcode></pre> |
| 811 | <pre> <personracecode> </personracecode></pre> |
| 812 | • <personsexcode></personsexcode> |
| 813 | <pre> <personunioncategorycode> </personunioncategorycode></pre> |
| 814 | • <physicalfeaturecategorycode></physicalfeaturecategorycode> |
| 815 | <vehiclecolorprimarycode></vehiclecolorprimarycode> |
| 816 | VehicleMakeCode> |
| 817 | • <vehiclemodelcode></vehiclemodelcode> |
| 818 | • <vehiclestylecode></vehiclestylecode> |
| 819 | • <weightunitcode></weightunitcode> |
| 820 | |
| 821 822 | Code lists defined using [Genericode] 1.0 are indicated with asterisks (*). The remaining code lists are defined in XSD schema definitions. |

3.3.3 Message-Specific Business Rules 824

825 The following business rules apply to specific messages:

3.3.3.1 CoreFilingMessage 826

827 A CoreFilingMessage MUST express the name or names of the party or parties on whose behalf a

828 document is filed, and the party whose document is the subject of a responsive document being 829 submitted for filing. If a case refers to a single element using the legal term "In Re," the filer SHOULD use

830 the NIEM <j:CaseRespondentParty>, not the <j:CaseInitiatingParty> element.

- A CoreFilingMessage MAY NOT include documents for transactions such as the payment of a criminal 831
- fine. If a CoreFilingMessage includes documents, the message MUST include only one level of 832
- connected and supporting documents. If a CoreFilingMessage includes multiple renditions of the same 833
- 834 document, the <nc:BinaryDescriptionText> element SHOULD be used to determine how to
- process multiple renditions of the same document. The <ecf:DocumentMetadata> and 835
- 836 <ecf:DocumentRenditionMetadata> structures MAY be extended to support more sophisticated 837 workflow processes.

3.3.3.2 FilingPaymentMessage 838

839 ECF 4.0 supports multiple particular payment processes. Information about a payment is included in the

FilingPaymentMessage including the method of payment of the applicable fees, e.g., electronic funds 840 transfer, credit or debit card, charge to an escrow account held in the court or promise to pay in the 841

842 future. The payment MAY include a maximum amount for the payment if some latitude is needed to

accomplish the filing. 843

3.3.3.3 RecordDocketingMessage 844

845 The court record system SHOULD retain all complete message transmissions, including any message 846 envelopes and headers defined by the service interaction profile, for evidentiary purposes.

3.4 Filing the Record on Appeal 847

This section describes the process for filing and subsequently amending the Record on Appeal (ROA) 848 849 using ECF 4.0.

- 850
- All ROA transactions, either the original filing or subsequent amendments, MUST contain, as the 851 • lead document, an Index of Record document that itemizes the content of the record on appeal. 852
- 854
 - The documents that comprise the ROA transaction will be identified as supporting documents. •
- 855

853

- 856 The supporting documents that comprise the ROA transaction MAY also have additional attached 857 documents.
- 858

³ There are no set requirements for the structure or content of the Index of Record document

| 859 • 860 861 862 863 | All ROA documents being submitted, including the Index of Record document and each document within the record, MUST have at least one court-defined document type that indicates the type of transaction to be performed on the document, and whether the document is being added to or stricken from the record. |
|-----------------------------------|---|
| 864 • 865 866 867 | The Index of Record document and each document within the ROA transaction MAY also have an additional document type or types, which characterize the document for the Court Record MDE. |
| 868 • 869 870 871 | When a document within the ROA transaction is being stricken from the court record, the document MUST be identified by the unique document identifier, which was provided by the Court Record MDE when the document was initially filed (See section 3.3.1.4). |
| 872 • 873 874 875 | A hierarchical structure of case lineage elements MUST be used to express the target case's predecessor cases at prior courts. Each predecessor case MAY also have its own predecessor case, as necessary to express the full lineage of an appellate case. ⁴ |
| 876 • 877 878 879 | When the ROA transaction is electronically transferred from one court to another, the target case number in the destination court and the case lineage, which includes the predecessor case number in the sending court, MUST be provided. |
| 880 • 881 882 | If the ROA transaction is a case initiating filing in the destination court, then the FilingCase object MUST be present and the CaseTrackingID MUST be absent. |
| 883 • 884 885 886 | Each predecessor case identified in the target case's case lineage may include case type-specific and court-specific extensions. The case type and the case type-specific extensions for each predecessor case MUST be consistent throughout the case lineage. |

⁴ Explanation (non-normative): There is not always a one to one correspondence between a lower court case (i.e. a trial court case) and the target appellate case. A single trial court case could have multiple descendent cases, and a single appellate case can have multiple predecessors. In the situation where an appellate case has multiple predecessor cases, each predecessor case will send a record on appeal to the target court for the appellate case. Each individual record will have an independent index of record. The warning above against sending multiple ROA transactions while a prior transaction is still pending must be regarded in light of the record to which the transaction is intended (or if you prefer, the predecessor cases, case A and case B. If an ROA transaction for the record from case A is pending (awaiting acceptance or rejection), this will not have any potential adverse impact on an ROA transaction from case B. Similarly, if a single lower court case were on appeal in two different appellate cases (say case Y and case Z), then while an ROA transaction (assuming of course that case Z does not also have a pending ROA transaction from the same predecessor case).

887 When a ROA amendment transaction is sent, the Index of Record document MUST reflect the • 888 status of the record assuming that the transaction will be accepted. If however the transaction is 889 rejected, there will be ramifications for other pending amendment transactions for the same ROA in the same target case. 5 890 891 892 While an ROA transaction is awaiting acceptance or rejection in the destination court, and when • the target case consists of multiple records, courts SHOULD NOT send additional amendment 893 transactions intended for the same record for the same target case. 894 895 896 Individual documents within the ROA transaction MUST not be individually accepted or rejected. • All documents within the ROA transaction MUST have the same acceptance or rejection 897 898 disposition. 899

⁵ While an ROA transaction is awaiting acceptance or rejection in the destination court, courts are cautioned against, but not prohibited from, sending additional amendment transactions for the same record in the same target case, regardless of whether the case contains one or many records.

900 **4 ECF 4.0 Schemas**

| 901 902 | The Court Filing XSD schemas are implementations of the ECF 4.0 exchange content models (see Appendix B.3 below). They are the only normative representations of ECF 4.0 messages. |
|---------------------------------|---|
| 903 904 905 906 907 | All of the ECF 4.0 XSD schemas are contained in the xsd/ subdirectory of the ECF 4.0 release package (see Appendix A for more information regarding the structure of the release package). The xsd/ directory is further subdivided into the xsd/casetype/, xsd/common/, xsd/constraint/, xsd/message/, and xsd/Subset/ subdirectories. |
| 908 | 4.1 ECF 4.0 Case Type Schemas |
| 909 910 911 | The XSD schemas that define extensions specific to certain ECF 4.0 case types are included in the $xsd/casetype/$ directory, as listed below: |
| 912 | AppellateCase |
| 913 | xsd/casetype/ECF-4.0-AppellateCase.xsd |
| 914 | BankruptcyCase |
| 915 | xsd/casetype/ECF-4.0-BankruptcyCase.xsd |
| 916 | CitationCase |
| 917 | xsd/casetype/ECF-4.0-CitationCase.xsd |
| 918 | CivilCase |
| 919 | xsd/casetype/ECF-4.0-CivilCase.xsd |
| 920 | CriminalCase |
| 921 | xsd/casetype/ECF-4.0-CriminalCase.xsd |
| 922 | DomesticCase |
| 923 | xsd/casetype/ECF-4.0-DomesticCase.xsd |
| 924 | JuvenileCase |
| 925 | xsd/casetype/ECF-4.0-JuvenileCase.xsd |
| 926 | |
| 927 | 4.2 ECF 4.0 Common Schemas |
| 928 929 930 | The XSD schemas that define the generic elements and types that are common to multiple ECF 4.0 messages and/or case types are located in the $xsd/common/$ folder, as listed below: |
| 930 931 | AppInfo |
| 932 | xsd/common/ECF-4.0-AppInfo.xsd |
| 933 | CommonTypes |
| 934 | xsd/common/ECF-4.0-CommonTypes.xsd |
| 935 | DigitalSignature |
| 936 | xsd/common/xmldsig-core-schema.xsd |

- 937 Genericode
- 938 xsd/common/genericode.xsd

4.3 ECF 4.0 Constraint and Subset Schemas 939

The XSD schemas that define the subset of all NIEM elements and types that are used in ECF 4.0 940

941 messages and/or case type extensions are located in the xsd/Subset/niem/ folder. As a general

942 data model, NIEM does not define any constraints regarding the minimum and maximum occurrence of

943 elements contained within types. Therefore, in conformance with NIEM, ECF-specific constraints are not

944 included in the schemas within the xsd/Subset/niem folder. The XSD schemas in the

945 xsd/constraint/niem/ folder represent the NIEM subset schemas with the ECF-specific constraints

- applied and are the schemas by which the ECF message and case type schemas incorporate NIEM 946
- 947 elements and types.

A A ECE A O Massaga Schomas ~ . ~

| 948 | 4.4 EUF 4.0 Message Schemas |
|------------|--|
| 949 950 | The XSD schemas defining the messages that support the ECF 4.0 processes are located in the $xsd/messages/$ folder, as listed below: |
| 951 | |
| 952 | CaseListQueryMessage |
| 953 | xsd/message/ECF-4.0-CaseListQueryMessage.xsd |
| 954 | CaseListResponseMessage |
| 955 | xsd/message/ECF-4.0-CaseListResponseMessage.xsd |
| 956 | CaseQueryMessage |
| 957 | xsd/message/ECF-4.0-CaseQueryMessage.xsd |
| 958 | CaseResponseMessage |
| 959 | xsd/message/ECF-4.0-CaseResponseMessage.xsd |
| 960 | CoreFilingMessage |
| 961 | xsd/message/ECF-4.0-CoreFilingMessage.xsd |
| 962 | CourtPolicyQueryMessage |
| 963 | xsd/message/ECF-4.0-CourtPolicyQueryMessage.xsd |
| 964 | CourtPolicyReponseMessage |
| 965 | xsd/message/ECF-4.0-CourtPolicyResponseMessage.xsd |
| 966 | DocumentQueryMessage |
| 967 | xsd/message/ECF-4.0-DocumentQueryMessage.xsd |
| 968 | DocumentResponseMessage |
| 969 | xsd/message/ECF-4.0-DocumentResponseMessage.xsd |
| 970 | FeesCalculationQueryMessage |
| 971 | xsd/message/ECF-4.0-FeesCalculationQueryMessage.xsd |
| 972 | FeesCalculationResponseMessage |
| 973 | xsd/message/ECF-4.0-FeesCalculationResponseMessage.xsd |
| 974 | FilingListQueryMessage |
| 975 | xsd/message/ECF-4.0-FilingListQueryMessage.xsd |
| 976 | FilingListResponseMessage |
| 977 | xsd/message/ECF-4.0-FilingListResponseMessage.xsd |
| 978 | FilingStatusQueryMessage |
| 979 | xsd/message/ECF-4.0-FilingStatusQueryMessage.xsd |
| 980 | FilingStatusResponseMessage |
| 981 | xsd/message/ECF-4.0-FilingStatusResponseMessage.xsd |

| 982 | MessageReceiptMessage |
|------|---|
| 983 | xsd/message/ECF-4.0-MessageReceiptMessage.xsd |
| 984 | PaymentMessage |
| 985 | xsd/message/ECF-4.0-PaymentMessage.xsd |
| 986 | PaymentReceiptMessage |
| 987 | xsd/message/ECF-4.0-PaymentReceiptMessage.xsd |
| 988 | RecordDocketingCallbackMessage |
| 989 | xsd/message/ECF-4.0-RecordDocketingCallbackMessage.xsd |
| 990 | RecordDocketingMessage |
| 991 | xsd/message/ECF-4.0-RecordDocketingMessage.xsd |
| 992 | ReviewFilingCallbackMessage |
| 993 | xsd/message/ECF-4.0-ReviewFilingCallbackMessage.xsd |
| 994 | ServiceInformationQueryMessage |
| 995 | xsd/message/ECF-4.0-ServiceInformationQueryMessage.xsd |
| 996 | ServiceInformationResponseMessage |
| 997 | xsd/message/ECF-4.0-ServiceInformationResponseMessage.xsd |
| 998 | ServiceReceiptMessage |
| 999 | xsd/message/ECF-4.0-ServiceReceiptMessage.xsd |
| 1000 | |

1001 5 Service Interaction Profiles

An ECF 4.0 service interaction profile defines a transmission system that supports the functional requirements of electronic filing, along with the MDE operations and message structures, and implements certain non-functional requirements. A service interaction profile does not govern the content of messages – message content is described in Sections 2 and 3 of this specification. A service interaction profile will define how a message gets from the sending MDE to the receiving MDE in a given messaging framework.

1008 **5.1 Service Interaction Profile Requirements**

Each service interaction profile will define standard conventions and configuration details to support
 interoperability between and among ECF 4.0 implementations that support the same service interaction
 profile. However, compliance with these requirements will not necessarily guarantee interoperability.

- 1012 To be compliant with the ECF 4.0 specification, a service interaction profile MUST satisfy the following 1013 non-functional requirements:
- Transport protocol A service interaction profile MUST define how messages are physically transported from a sending MDE to a receiving MDE. In so doing, a profile may identify factors that restrict the range of environments in which the profile is applicable.
- 1017 2. MDE addressing A service interaction profile MUST include a convention for uniquely addressing
 1018 each MDE.
- Operation addressing A service interaction profile MUST describe a convention for uniquely addressing each MDE operation.
- 1021 4. Request and operation invocation A service interaction profile MUST describe a mechanism for a sending MDE to invoke an operation on the receiving MDE.
- Synchronous mode response A service interaction profile MUST support synchronous operations in which the response to an operation is always returned immediately, typically within a matter of seconds, to the invoking MDE.
- Asynchronous mode response A service interaction profile MUST support asynchronous operations in which the response to an operation may not necessarily be returned immediately to the invoking MDE. Instead, the response may be returned at some later time through a callback from the MDE that received the operations to the invoking MDE. The callback MUST include a reference to the invoking message transmission.
- 1031 7. Message/attachment delimiters A service interaction profile MUST define how the receiving MDE distinguishes messages from attachments within a message transmission.
- Message identifiers A service interaction profile MUST provide a means for a sending MDE to assign a unique identifier to each message (including any attachments) within a message transmission.
- 1036 In addition, there are some non-functional features that a service interaction profile SHOULD provide, 1037 including:
- 1038 1. **Message non-repudiation** A service interaction profile SHOULD provide a mechanism so that the receiving MDE is provided with evidence that demonstrates:
- a. the identity of the sending MDE
- b. the content of the message(s) transmitted
- 1042 c. the date and time of the message transmission
- Message integrity A service interaction profile SHOULD provide a mechanism so that the receiving MDE is able to determine whether the message(s) transmitted (including any attachments) was (were) modified during the message transmission.

- Message confidentiality A service interaction profile SHOULD provide a mechanism, such as encryption, that can be used with a sending MDE to ensure that the message(s) in a transmission (including any attachments) can be processed only by the receiving MDE.
- Message authentication A service interaction profile SHOULD provide a mechanism, such that a sending MDE is required to include, to display credentials that demonstrate its identity to the receiving MDE in each message transmission.
- 5. Message transmission reliability A service interaction profile SHOULD provide a mechanism, such that a sending MDE is required to include, to guarantee that a message transmission will be delivered to the receiving MDE within a specified period of time, or else the sending MDE will receive notification at the end of that period of time that the message transmission was not deliverable to the receiving MDE.
- 1057 6. Message splitting and assembly A service interaction profile SHOULD provide a mechanism by
 1058 which a large message and attachments MAY be split into multiple pieces that are transmitted
 1059 separately by the sending MDE and reassembled into the complete message by the receiving MDE.
 1060 In the HTTP 1.1 protocol, this is called "chunking."
- Transmission auditing A service interaction profile SHOULD provide a mechanism for the MDE to
 receive message transmissions in their entirety (both messaging and "payload" content) for auditing
 purposes.

1064 **5.2 Service Interaction Profile Approval and Revision Processes**

- 1065The ECF Technical Committee (TC) will recommend certain service interaction profiles for use in1066implementations of the ECF 4.0 specification. The TC will consider a service interaction profile for1067recommendation for use in ECF 4.0 implementations provided the profile meets the following1068requirements:
- The service interaction profile MUST be described in a document in the format of an OASIS
 specification.
- The service interaction profile specification MUST identify a unique URI to identify the service interaction profile and version.
- The service interaction profile specification MUST describe the binding of MDE operations to the service interaction profile that satisfies the functional requirements described in Section 3 ("ECF 4.0 Process Model") and Section 4 ("ECF 4.0 Schema") of this specification.
- 1076
 1077
 1078
 The service interaction profile specification MUST demonstrate that the service interaction profile satisfies the non-functional service interaction profile requirements described in Section 5.1 ("Service Interaction Profile Requirements") of this specification.
- 1079 5. The service interaction profile specification MUST include samples that demonstrate how the
 1080 messaging information and "payload" content are combined into message transmissions. These
 1081 samples MUST include samples that demonstrate both synchronous and asynchronous mode
 1082 operations.
- At least one voting member of the ECF TC MUST agree to sponsor the service interaction profile and
 submit the service interaction profile specification to the TC for review as a candidate for approval as
 an ECF 4.0 compliant service interaction profile.
- 1086 Certifying that a candidate service interaction profile meets certain service interaction profile requirements
 1087 will necessarily involve some subjectivity since service interaction profile requirements cannot be
 1088 expressed algebraically, in the manner of XML Schemas. Therefore, it will be up to the TC to assess
 1089 whether the proposed profile's description is adequate in meeting the requirements of ECF 4.0 before
 1090 approving the service interaction profile specification as a "Committee Draft" through the OASIS
 1091 standards approval process.
- From time to time, it may be necessary to revise or update a service interaction profile to bring it into compliance with changes in network and messaging protocols, or to support additional non-functional requirements. Any revision(s) to previously approved service interaction profiles will be considered a new service interaction profile and MUST meet the requirements of a new service interaction profile, including sponsorship by a voting member of the ECF TC and review and approval by the ECF TC. There will be

1097 no guarantees that future versions of a service interaction profile will be backwardly compatible with the 1098 current version.

1099 **5.3 Supported Service Interaction Profiles**

- 1100 The following ECF 4.0 service interaction profile specifications are for use in conjunction with 1101 implementations of the ECF 4.0 specification:
- Web Services Service Interaction Profile 2.0 Specification This specification defines a transmission system using the specifications described in the Web Services Interoperability (WS-I) Basic Profile 1.1, W3C SOAP 1.1 Binding for MTOM 1.0, WS-I Basic Security Profile 1.0 and OASIS
 WS-Reliable Messaging 1.1.
- Web Services Service Interaction Profile 2.1 Specification This specification defines a transmission system using the specifications described in the Web Services Interoperability (WS-I) Basic Profile 1.1, W3C SOAP 1.1 Binding for MTOM 1.0 and WS-I Basic Security Profile 1.1 and OASIS WS-Reliable Messaging 1.1.
- Portable Media Service Interaction Profile 1.01 Specification This specification defines a transmission system in which the sending MDE stores message transmissions on portable media (e.g., a compact disc), which is then physically transported to the receiving MDE where it is connected for retrieval of the message transmissions. This specification may be needed in the absence of an active network between the sending and receiving MDEs.
- 1115 Additional service interaction profiles, or revisions to these service interaction profiles, may be approved
- by the ECF TC for use in conjunction with implementations of the ECF 4.0 specification according to the
- 1117 process described in Section 5.2 ("Service Interaction Profile Approval and Revision Processes") above.

1118 6 Document Signature Profiles

1119 An ECF 4.0 document signature profile defines a mechanism for asserting that a person signed a single

- 1120 electronic or imaged document, which is an attachment to a message transmission. The signing of an
- entire message transmission is described in a service interaction profile and is not supported by a
 document signature profile.

1123 **6.1 Document Signature Profile Requirements**

- Each document signature profile will define standard conventions and configuration details to support interoperability in the creation and verification of document signatures between and among ECF 4.0 implementations that support the same document signature profile. However, compliance with these requirements will not necessarily guarantee interoperability.
- 1128 Except for the Null Document Signature Profile, to be compliant with the ECF 4.0 specification, a 1129 document signature profile MUST satisfy the following non-functional requirements:
- 1130 1. **Signer name assertion** A document signature profile MUST make an assertion regarding the name of the person who signed a document.
- Signed date assertion A document signature profile MUST make an assertion regarding the date the person signed a document.
- Multiple signatures A document signature profile MUST allow multiple signatures to be associated with the same document.
- 1136 A signature profile SHOULD provide the following non-functional features:
- Signer and date non-repudiation A document signature profile SHOULD provide a mechanism so that the receiving MDE is provided with verifiable evidence that demonstrates:
 - a. the unique identity of the person who signed the document
- b. the date the person signed a document

1139

- Document integrity A document signature profile SHOULD provide a mechanism so that the receiving MDE is able to determine if the document was modified since the person signed the document.
- 1144
 3. Document signature auditing A document signature profile SHOULD provide a mechanism for
 1145
 the MDE to receive both the document and signatures for auditing purposes.

1146 **6.2 Document Signature Profile Approval and Revision Processes**

- 1147 The ECF Technical Committee will recommend certain document signature profiles for use in 1148 implementations of the ECF 4.0 specification. The TC will consider a document signature profile for
- recommendation for use in ECF 4.0 implementations provided the profile meets the following requirements:
- The document signature profile MUST be described in a document in the format of an OASIS specification.
- 11532. The document signature profile specification MUST identify a unique URI to identify the document signature profile and version.
- If the document signature is not embedded in the document, the document signature profile
 specification MUST include an XML structure for describing precisely how the document signature is
 represented.
- 4. The document signature profile specification MUST demonstrate that the document signature profile satisfies the non-functional requirements described in Section 6.1 ("Document Signature Profile Requirements") of this specification.

- 5. The document signature profile specification MUST include samples that demonstrate how thedocument signature information and "payload" content are combined into message transmissions.
- At least one voting member of the ECF TC MUST agree to sponsor the document signature profile
 and submit the document signature profile specification to the TC for review as a candidate for
 approval as an ECF 4.0 document signature profile.
- 1166 Certifying that a candidate document signature profile meets certain document signature profile
- 1167 requirements will necessarily involve some subjectivity, since document signature profile requirements
- 1168 cannot be expressed algebraically, in the manner of XML Schemas. Therefore, it will be up to the TC to 1169 assess whether the proposed profile's description is adequate to the requirements before approving the
- 1170 profile specification as a Committee Draft through the OASIS standards approval process.
- 1171 From time to time, it may be necessary to revise or update a document signature profile to bring it into
- 1172 compliance with changes in authentication and encryption protocols, or to support additional non-
- 1173 functional requirements. Any revision(s) to previously approved document signature profiles will be
- 1174 considered a new document signature profile and MUST meet the requirements of a new document
- 1175 signature profile, including sponsorship by a voting member of the ECF TC and review and approval by
- 1176 the ECF TC. There will be no guarantees that future versions of document signature profiles will be 1177 backwardly compatible with the current version.

1178 6.3 Supported Document Signature Profiles

- 1179 The following ECF 4.0 document signature profile specifications are candidate Committee Drafts for use 1180 in conjunction with implementations of the ECF 4.0 specification:
- Null Document Signature Profile 1.0 Specification This specification defines a default
 mechanism to describe documents that do not have any associated signatures.
- **XML Document Signature Profile 1.0 Specification** This specification defines a mechanism for associating a W3C XML Signature with a document.
- Application-Specific Document Signature Profile 1.0 Specification This specification defines a mechanism for embedding an application-specific binary signature with a document. This profile supports the native capabilities in document formats such as Microsoft Word and the Adobe Portable Document Format (PDF) for describing and embedding signatures.
- Proxy Document Signature Profile 1.0 Specification This specification defines a mechanism for indicating documents that are digitally signed by a court filing infrastructure component on behalf of an authenticated signer.
- Symmetric Key Document Signature Profile 1.0 Specification This specification defines a mechanism for indicating documents that are digitally signed by a trusted entity on behalf of the signer using a symmetric key known only to the trusted entity.
- 1195 Additional document signature profiles, or revisions to these document signatures profiles, may be
- approved by the ECF TC for use in conjunction with implementation of the ECF 4.0 specification
- 1197 according to the process described in Section 6.2 ("Document Signature Profile Approval and Revision
- 1198 Processes") above.

7 Conformance 1199

1200

An implementation conforms with the Electronic Court Filing Version 4.01 if the implementation meets the requirements in Sections 1-6 including conformance with the XSD schemas and [Genericode] code lists 1201 1202 referenced in Section 3 and 4.

1203 Appendix A. (Informative) Release Notes

1204 A.1 Availability

1205 Online and downloadable versions of this release are available from the locations specified at the top of 1206 this document.

1207 A.2 Package Structure

1208 The ECF 4.0 specification is published as a ZIP archive named ecf-v4.0.zip. Unzipping this archive creates a directory named ecf-4.0/ containing this specification document and a number of 1209 1210 subdirectories. The files in these subdirectories, linked to the specification document, contain the various normative and informational pieces of the 1.0 release. A description of each subdirectory is given below. 1211 1212 ac/ 1213 [Genericode] 1.0 code lists 1214 model/ 1215 ECF 4.0 UML exchange content model diagrams and spreadsheet models; see Appendix B.3 and 1216 B4 1217 xml/ 1218 Example instances; see Appendix D 1219 xsd/ 1220 XSD schemas; see Section 4

1221 A.3 Recursive Structures

Certain components in the **[NIEM]** version 2.0 schemas allow recursive nesting. For example, a nc:Case may be related to another nc:Case, etc. These are legitimate business data structures. Most real-world applications will limit the depth of recursion in such structures, but XSD schemas are incapable of expressing this constraint. Implementers should be aware of this and may wish to set limits on the depth of recursive structures in their applications.

1227 A.4 Date and Time Formats

1228 The date and time elements contained in the messages defined by the ECF 4.0 XSD schemas should be 1229 formatted according to the documentation in the **[NIEM]** version 2.0. The **[NIEM]** documentation 1230 indicates the following:

- Calendar date values should be expressed as "CCYY-MM-DD", with an optional time zone qualifier designated by appending -hh:00, where hh represent the number of hours the local time zone is behind Coordinated Universal Time (UTC).
- Time values should be expressed as "hh:mm:ss.sss", with an optional time zone qualifier designated by appending -hh:00, where hh represent the number of hours the local time zone is behind
 Coordinated Universal Time (UTC).
- Date and time values should be expressed as "CCYY-MM-DDThh:mm:ss.sss" with an optional time
 zone designated by appending -hh:00, where hh represent the number of hours the local time zone is
 behind Coordinated Universal Time (UTC).qualifier.

1240 These formats are documented in, but not enforced by, the XSD schema at

1241 xsd/constraint/niem/proxy/xsd/2.0/xsd.xsd.

1242 A.5 Known Errata

1243 Known errors in the ECF 4.0 specification will be identified in an errata document available at: 1244 http://www.oasis-open.org/committees/legalxml-courtfiling/.

Appendix B. (Informative) ECF 4.0 Development Approach and Artifacts

1247 This appendix describes the approach used to develop ECF 4.0 and the modeling artifacts.

1248 B.1 Principles

- 1249 The key principles that guided the design of the ECF 4.0 message structures were:
- Interoperability The ECF 4.0 message structures should provide a means for exchanging court filings among all types of court information systems.
- Completeness The ECF Filing 4.0 message structures format should provide for all the elements of an electronic filing system.
- **Simple implementation** The design should foster rapid implementation.
- Simple XML and portable structure The core messages in an ECF 4.0 exchange will be formatted as XML documents.
- **Familiarity** The data elements and code values should be meaningful to the legal community and non-expert recipients alike.
- Interdisciplinary and international utility The design should be usable by a broad range of court related applications and should be applicable internationally.

1261 B.2 Approach

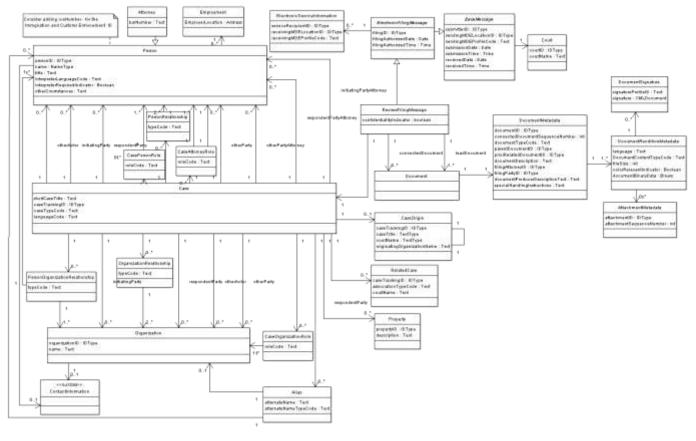
- 1262 The ECF 4.0 message schemas were developed as a **[NIEM]** Information Exchange Package Definition 1263 (IEPD). A **[NIEM IEPD]** is a collection of artifacts that describe the structure and content of a set of data 1264 that is transmitted for a specific business purpose. It does not specify other interface layers (such as Web 1265 services).
- 1266 The NIEM Naming and Design Rules (MNDR) **[NIEM NDR]** describe best practices for the development 1267 of NIEM-conformant Information Exchange Packages and documentation. The Design Rules set forth:
- 1268 A methodology for the construction of [NIEM]-conformant exchange documents
- Naming and design rules for the artifacts called for by the methodology
- Guidelines for the customization of **[NIEM]** schema structures

1271 B.3 ECF 4.0 Exchange Content Models

- 1272 The ECF 4.0 exchange content models describe the information components used in all of the messages 1273 defined by ECF 4.0.
- 1274 The exchange content models are the result of a detailed analysis of the data requirements to support the 1275 ECF 4.0 Process Model (see Section 3). During the modeling process, common items of data were
- 1275 ECF 4.0 Process Model (see Section 3). During the modeling process, common items of data were 1276 identified by a process of normalization to identify aggregates based on functional dependency. Where
- 1277 appropriate, these were generalized so that they could be re-used to support the various messages.
- 1278 The exchange content models are used for the following purposes:
- They facilitate the identification of the reusable components, i.e., the data structures that are common across the ECF 4.0 messages.
- They aid in understanding the information requirements of the total scenario.
- They are the source from which the object classes are derived and documented in the ECF 4.0 schemas (see Section 4).

- 1284 To facilitate comprehension, the ECF 4.0 is composed of several exchange content model diagrams.
- Each diagram represents a logical grouping of components and displays both the attributes and object classes belonging to the components in this grouping. The scope of each diagram is arbitrary and does
- 1287 not hold any significance beyond these diagrams.

1288 For example, the ECF 4.0 Review Filing Model diagram is shown below:



- 1289
- 1290
- 1291
- 1292 The complete set of exchange content models for all the ECF 4.0 components is listed below:
- 1293
- 1294 Appellate Filing Model
- 1295 model/uml/html/AppellateFiling.png
- 1296 Bankruptcy Filing Model
- 1297 model/uml/html/BankruptcyFiling.png
- 1298 Base Message Model
- 1299 model/uml/html/BaseMessage.png
- 1300 Civil Filing Model
- 1301 model/uml/html/CivilFiling.png
- 1302 Citation Filing Model
- 1303 model/uml/html/Violation Filing.png
- 1304 Criminal Filing Model
- 1305 model/uml/html/CriminalFiling.png
- 1306 **Domestic Filing Model**

| 1307 | model/uml/html/DomesticFiling.png |
|--------------|--|
| 1308 | Extended Person Information Model |
| 1309 | model/uml/html/ExtendedPersonInformation.png |
| 1310 | Get Calculated Fees Query Model |
| 1311 | model/uml/html/GetFeesCalculationQuery.png |
| 1312 | Get Case List Query Model |
| 1313 | model/uml/html/GetCaseListQuery.png |
| 1314 | Get Document Query Model |
| 1315 | model/uml/html/GetDocumentQuery.png |
| 1316 | Get Filing List Query Model |
| 1317 | model/uml/html/GetFilingListQuery.png |
| 1318 | Get Filing Status Query Model |
| 1319 | model/uml/html/GetFilingStatusQuery.png |
| 1320 | Get Service Information Query Model |
| 1321 | model/uml/html/GetServiceInformationQuery.png |
| 1322 | Major Design Elements Model |
| 1323 | model/uml/html/MajorDesignElements.png |
| 1324 | Juvenile Filing Model |
| 1325 | model/uml/html/JuvenileFiling.png |
| 1326 | Record Docketing Model |
| 1327 | model/uml/html/RecordDocketing.png |
| 1328 | Review Filing Model |
| 1329 | model/uml/html/ReviewFiling.png |
| 1330 | |
| 1331 1332 | No specific directions are defined for the associations in these models; they can be navigated in either direction. The specific navigation path for each association is defined when documents are assembled. |

1333 B.4 Spreadsheet Models

ECF 4.0 uses spreadsheet models to describe the mapping of objects and attributes to [NIEM] and ECF
4.0 elements. The spreadsheet models use rows to define components. Components are either simple
data types or associations. Columns define the metadata associated with each component type.

1337 The ECF 4.0 spreadsheet model is located at model/ECF-4.0-NIEM2-mapping.xls.

1338

1339 Appendix C. (Informative) MDE Operations

1340 This appendix details the operations that are provided by each Major Design Element (MDE) and the 1341 operations, provided by other MDEs that each MDE "consumes." Implementation of an MDE requires 1342 both that the MDE provide certain functionality and that the MDE use particular operations provided by 1343 other MDEs.

1344 C.1 Filing Assembly MDE

The Filing Assembly MDE supports the preparation and submission of filed documents to a court for review, and can receive the results of that process. The Filing Assembly MDE also conveys filings to the Legal Service MDE for service on other case participants. The Filing Assembly MDE calls operations in other MDEs and provides a single operation for notifying the submitter that the filing has been reviewed by a court. A Filing Assembly MDE may be provided by a court or by a third party.

1350 C.1.1 Provided Operations

| Operation | Called By | Output | Parameters |
|--------------------------------------|----------------------|---|--|
| NotifyFilingReview Filing Review MDE | Filing Review MDE | xsd/message/ECF-4.0- MessageReceiptMessag e.xsd : | xsd/message/ECF-4.0- ReviewFilingCallbackMessage.xsd : ReviewFilingCallbackMessage |
| | | MessageReceiptMessag e | xsd/message/ECF-4.0-PaymentMessage.xsd : PaymentMessage |

1351 The Filing Assembly MDE provides the following operations to other MDEs:

1352 C.1.2 Consumed Operations

1353 The Filing Assembly MDE calls the following operations in other MDEs:

| Operation | Provided By | Return Type |
|-----------------------|-------------------|--|
| GetPolicy | Filing Review MDE | xsd/message/ECF-4.0-CourtPolicyQueryMessage.xsd : CourtPolicyReponseMessage |
| ReviewFiling | Filing Review MDE | xsd/message/ECF-4.0-MessageReceiptMessage.xsd : MessageReceiptMessage |
| GetFeesCalculation | Filing Review MDE | xsd/message/ECF-4.0- FeesCalculationResponseMessage.xsd : FeesCalculationResponseMessage |
| GetFilingStatus | Filing Review MDE | xsd/message/ECF-4.0- FilingStatusResponseMessage.xsd : FilingStatusResponseMessage |
| GetFilingList | Filing Review MDE | xsd/message/ECF-4.0-FilingListResponseMessage.xsd : FilingListResponseMessage |
| GetCase | Court Record MDE | xsd/message/ECF-4.0-CaseResponseMessage.xsd : CaseResponseMessage |
| GetCaseList | Court Record MDE | xsd/message/ECF-4.0-CaseListResponseMessage.xsd : CaseListResponseMessage |
| GetServiceInformation | Court Record MDE | xsd/message/ECF-4.0- ServiceInformationResponseMessage.xsd : ServiceInformationResponseMessage |
| GetDocument | Court Record MDE | xsd/message/ECF-4.0-DocumentResponseMessage.xsd : |

| | | DocumentResponseMessage |
|-------------|-------------------|--|
| ServeFiling | Legal Service MDE | xsd/message/ECF-4.0-ServiceReceiptMessage.xsd : ServiceReceiptMessage |

1354 C.2 Filing Review MDE

The Filing Review MDE receives, presents and manages the filings. The Filing Review MDE receives filings in a standard format and presents those filings to a Clerk for review, where they may be accepted or rejected. The Filing Review MDE transmits data and documents to the Filing Assembly MDE to inform the filer that the filing has been accepted or rejected. The Filing Review MDE transmits data and documents for accepted filings to the Court Record MDE for docketing and recording. While there will generally be one Filing Review MDE per court, there is no physical barrier to having more than one, particularly if a court wants to support different Filing Review MDEs for particular case types.

1362 C.2.1 Provided Operations

| Operation | Called By | Output | Parameters |
|-----------------------------|---------------------------|--|--|
| ReviewFiling | Filing Assembly | xsd/message/ECF-4.0- MessageReceiptMessag | xsd/message/ECF-4.0-CoreFilingMessage.xsd : CoreFilingMessage |
| | MDE | e.xsd : MessageReceiptMessag e | xsd/message/ECF-4.0-PaymentMessage.xsd : PaymentMessage |
| NotifyDocketingCo mplete | Court Docketing MDE | xsd/message/ECF-4.0- MessageReceiptMessag e.xsd : MessageReceiptMessag e | xsd/message/ECF-4.0- RecordDocketingCallbackMessage.xsd : RecordDocketingCallbackMessage |
| GetFeesCalculatio n | Filing Assembly MDE | xsd/message/ECF-4.0- FeesCalculationRespon seMessage.xsd : FeesCalculationRespon seMessage | xsd/message/ECF-4.0- FeesCalculationQueryMessage.xsd : FeesCalculationQueryMessage |
| GetFilingList | Filing Assembly MDE | xsd/message/ECF-4.0- FilingListResponseMess age.xsd : FilingListResponseMess age | xsd/message/ECF-4.0- FilingListQueryMessage.xsd : FilingListQueryMessage |
| GetFilingStatus | Filing Assembly MDE | xsd/message/ECF-4.0- FilingStatusResponseM essage.xsd : FilingStatusResponseM essage | xsd/message/ECF-4.0- FilingStatusQueryMessage.xsd : FilingStatusQueryMessage |
| GetPolicy | Filing Assembly MDE | xsd/message/ECF-4.0- CourtPolicyQueryMessa ge.xsd : CourtPolicyReponseMes sage | xsd/message/ECF-4.0- CourtPolicyQueryMessage.xsd : CourtPolicyQueryMessage |

1363 The Filing Review MDE provides the following operations to other MDEs:

1364 C.2.2 Consumed Operations

1365 The Filing Review MDE calls the following operations in other MDEs:

| Operation Provided By Output |
|------------------------------|
|------------------------------|

| RecordFiling | Court Record MDE | xsd/message/ECF-4.0-MessageReceiptMessage.xsd : MessageReceiptMessage |
|----------------------------|---------------------|--|
| NotifyFilingReviewComplete | Filing Assembly MDE | xsd/message/ECF-4.0-MessageReceiptMessage.xsd : MessageReceiptMessage |

1366 C.3 Court Record MDE

1367 The Court Record MDE receives the filed documents from the Filing Review MDE and enters them into 1368 the official case record of the court. The Court Record MDE notifies the Filing Review MDE that the filing 1369 has been filed.

1370 C.3.1 Provided Operations

1371 The Court Record MDE provides the following operations to other MDEs:

| Operation | Called By | Output | Parameters |
|---------------------------|---------------------------|--|--|
| RecordFiling | Filing Review MDE | xsd/message/ECF-4.0- MessageReceiptMessag e.xsd : MessageReceiptMessag e | xsd/message/ECF-4.0- RecordDocketingMessage.xsd : RecordDocketingMessage |
| | | | xsd/message/ECF-4.04.0- CoreFilingMessage.xsd : CoreFilingMessage |
| GetCase | Filing Assembly MDE | xsd/message/ECF-4.0- CaseResponseMessage .xsd : CaseResponseMessage | xsd/message/ECF-4.0-CaseQueryMessage.xsd : CaseQueryMessage |
| GetCaseList | Filing Assembly MDE | xsd/message/ECF-4.0- CaseListResponseMess age.xsd : CaseListResponseMess age | xsd/message/ECF-4.0- CaseListQueryMessage.xsd : CaseListQueryMessage |
| GetServiceInformat ion | Filing Assembly MDE | xsd/message/ECF-4.0- ServiceInformationResp onseMessage.xsd : ServiceInformationResp onseMessage | xsd/message/ECF-4.0- ServiceInformationQueryMessage.xsd : ServiceInformationQueryMessage |
| GetDocument | Filing Assembly MDE | xsd/message/ECF-4.0- DocumentResponseMes sage.xsd : DocumentResponseMes sage | xsd/message/ECF-4.0- DocumentQueryMessage.xsd : DocumentQueryMessage |

1372 C.3.2 Consumed Operations

1373 The Court Record MDE calls the following operations in other MDEs:

| Operation | Provided By | Output |
|-------------------------|-------------------|--|
| NotifyDocketingComplete | Filing Review MDE | xsd/message/ECF-4.0-MessageReceiptMessage.xsd : MessageReceiptMessage |

1374 C.4 Legal Service MDE

1375 The Legal Service MDE enables a filer or a court to electronically transmit copies of, or links to,

1376 electronically filed documents to other parties who are participating in the case and who are entitled to be

promptly served with the electronically filed documents. The Filing Assembly MDE transmits data and

documents to the Legal Service MDE to inform the case participant that an electronic filing has been

1379 submitted to the court clerk. The Legal Service MDE transmits a callback message to the Filing1380 Assembly MDE requesting a notification to confirm receipt of the served document.

1381 C.4.1 Provided Operations

1382 The Legal Service MDE provides the following operations to other MDEs:

| Operation | Called By | Output | Parameters |
|-------------|---------------------------|--|--|
| ServeFiling | Filing Assembly MDE | xsd/message/ECF-4.0- ServiceReceiptMessage .xsd : ServiceReceiptMessage | xsd/message/ECF-4.0-CoreFilingMessage.xsd : CoreFilingMessage |

1383 C.4.2 Consumed Operations

1384 The Legal Service MDE does not call operations in other MDEs

1385 Appendix D. (Informative) Example Instances

| 1386 1387 | Example instances of each ECF 4.0 message are provided in the xml/ subdirectory, as listed below: |
|--------------|---|
| 1388 | FeesCalculationQueryMessage |
| 1389 | xml/ECF-4.0-FeesCalculationQueryMessage.xml |
| 1390 | FeesCalculationResponseMessage |
| 1391 | xml/ECF-4.0-FeesCalculationResponseMessage.xml |
| 1392 | CaseListQueryMessage |
| 1393 | xml/ECF-4.0-CaseListQueryMessage.xml |
| 1394 | CaseListResponseMessage |
| 1395 | xml/ECF-4.0-CaseListResponseMessage.xml |
| 1396 | CaseQueryMessage |
| 1397 | xml/ECF-4.0-CaseQueryMessage.xml |
| 1398 | CaseResponseMessage |
| 1399 | xml/ECF-4.0-CaseResponseMessage.xml |
| 1400 | CoreFilingMessage (Appellate case type) |
| 1401 | xml/ECF-4.0-CoreFilingMessage-Appellate.xml |
| 1402 | CoreFilingMessage (Criminal case type) |
| 1403 | xml/ECF-4.0-CoreFilingMessage-Criminal.xml |
| 1404 | CourtPolicyQueryMessage |
| 1405 | xml/ECF-4.0-CourtPolicyQueryMessage.xml |
| 1406 | CourtPolicyReponseMessage |
| 1407 | xml/ECF-4.0-CourtPolicyResponseMessage.xml |
| 1408 | DocumentQueryMessage |
| 1409 | xml/ECF-4.0-DocumentQueryMessage.xml |
| 1410 | DocumentResponseMessage |
| 1411 | xml/ECF-4.0-DocumentResponseMessage.xml |
| 1412 | FilingListQueryMessage |
| 1413 | xml/ECF-4.0-FilingListQueryMessage.xml |
| 1414 | FilingListResponseMessage |
| 1415 | xml/ECF-4.0-FilingListResponseMessage.xml |
| 1416 | FilingPaymentMessage |
| 1417 | xml/ECF-4.0-PaymentMessage.xml |
| 1418 | FilingStatusQueryMessage |
| 1419 | xml/ECF-4.0-FilingStatusQueryMessage.xml |
| 1420 | FilingStatusResponseMessage |
| 1421 | xml/ECF-4.0-FilingStatusResponseMessage.xml |
| 1422 | MessageReceiptMessage |
| 1423 | xml/ECF-4.0-MessageReceiptMessage.xml |
| 1424 | PaymentReceiptMessage |

- 1425 xml/ECF-4.0-PaymentReceiptMessage.xml 1426 RecordDocketingCallbackMessage 1427 xml/ECF-4.0-RecordDocketingCallbackMessage.xml 1428 RecordDocketingMessage 1429 xml/ECF-4.0-RecordDocketingMessage.xml 1430 **ReviewFilingCallbackMessage** 1431 xml/ECF-4.0-ReviewFilingCallbackMessage.xml 1432 ServiceInformationQueryMessage 1433 xml/ECF-4.0-ServiceInformationQueryMessage.xml 1434 ServiceInformationResponseMessage 1435 xml/ECF-4.0-ServiceInformationResponseMessage.xml
- 1436 ServiceReceiptMessage
- 1437 xml/ECF-4.0-ServiceReceiptMessage.xml

1438 Appendix E. (Informative) Ongoing Work Items

- 1439 The Electronic Court Filing TC plans to continue to revise and expand this specification through future 1440 versions. Future versions of ECF will:
- Address filings in administrative tribunals
- Address primary service (the delivery of documents such as summonses, subpoenas and warrants that establish a court's jurisdiction over a party)
- Consider how the specifications for filing of documents intended for filing with a court relate to
 specifications for filing other documents, e.g., property records, in the offices of elected clerks of
 courts
- Incorporate feedback from ECF implementations
- 1448 Support future releases of the [NIEM]
- 1449 Support future [Court Document] specifications and integration optimizations
- Support non-case related filings into a court clerk's office

1451 Appendix F. (Informative) Acknowledgments

1452 The following court organizations provided lists of data elements required for initiating cases in their case 1453 management information systems:

| 1454 | Administrative Office of United States Courts |
|--------------|--|
| 1455 | Bankruptcy, Civil, Criminal |
| 1456 | Arizona Administrative Office of the Courts |
| 1457 | Appellate |
| 1458 | Fourth Judicial District Court, Hennepin County, Minneapolis |
| 1459 | o Criminal |
| 1460 | King County Superior Court, Washington |
| 1461 | o Civil, Criminal |
| 1462 | Missouri Office of State Courts Administrator |
| 1463 | • Citation |
| 1464 | Thirteenth Judicial District, Orange County, Florida (through vendor) |
| 1465 | Civil, Criminal, Domestic relations, Mental health, Juvenile delinquency/dependency, |
| 1466 | Probate, Citation |
| 1467 1468 | Utah State Courts Civil Criminal |
| | o Civil, Criminal |
| 1469 | |
| 1470 | The following individuals were members or voting members of the committee during the development of |
| 1471 | this specification: |
| 1472 | Rolly Chambers, American Bar Association |
| 1473 | John Messing, American Bar Association |
| 1474 | Adam Angione, Courthouse News Service |
| 1475 | Eric Eastman Doxpop, LLC |
| 1476 | Robert DeFilippis, Associate |
| 1477 | Chester Ensign, Associate |
| 1478 | Gary Poindexter, Associate |
| 1479 | Michael Alexandrou, Judicial Council of Georgia |
| 1480 | Shawn Artrip, Judicial Council of Georgia, |
| 1481 | Robbie Diaz, Judicial Council of Georgiar |
| 1482 | Hui Ji, Judicial Council of Georgia |
| 1483 | Morgan Medders, Judicial Council of Georgia |
| 1484 | Scott Edson, LA County Information Systems Advisory Body |
| 1485 | Ali Farahani, LA County Information Systems Advisory Body |
| 1486 | John Ruegg, LA County Information Systems Advisory Body |
| 1487 | CJ Allen, Maricopa County |
| 1488 | Robin Gibson, Missouri Office of State Courts Admin |
| 1489 | James Cabral, MTG Management Consultants, LLC |
| 1490 | Thomas Clarke, National Center for State Courts |
| 1491 | Diana Graski, National Center for State Courts |
| 1492 | Jim Harris, National Center for State Courts |
| 1493 | Jason Hill, New York State Office of Court Administration, DoT |
| 1494 | Robert O'Brien, Ottawa Courts Administration Service |
| 1495 | George Knecht, PC Intellect, LLC |
| 1496 | Mark Ladd, Property Records Industry Assn. |
| 1497 | Ron Bowmaster. Utah Administrative Office of the Courts |
| | |

Appendix G. (Informative) Revision History

| Rev | Date | By Whom | What |
|--------|------------|--------------|--|
| Wd01 | 2008-03-17 | James Cabral | Initial version |
| Wd02 | 2008-08-15 | James Cabral | Revision including complete IEPD. |
| Wd03 | 2008-08-25 | James Cabral | Revisions based on August face to face meeting and initial testing. |
| Wd04 | 2008-09-03 | James Cabral | Revised guidance on filing record on appeal (Section 3.4) |
| Wd01 | 2008-09-20 | James Cabral | Committee draft |
| 4.01 | 2010-03-15 | James Cabral | Minor schema and definition changes based on feedback from implementers of the ECF 4.0 specification. |
| Csd-01 | 2011-08-08 | James Cabral | Revised reference format. Minor schema changes including correction of several constraints. Addition of Section 1.3.5 and revision of Section 2.4.3 based on feedback from implementers. |
| Csd-02 | 2011-10-18 | James Cabral | Updated UBL reference version 2.1. |
| Csd-03 | 2012-02-07 | James Cabral | Minor changes to Appendx C (non-normative). Minor additions to the schema. Revision of sections 2.4.1, 2.4.2, 3.1 and 3.3.3.2, based on feedback from implementers. |

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