



# Emergency Data Exchange Language (EDXL) Distribution Element Version 2.0

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### Additional artifacts:

This prose specification is one component of a Work Product ~~that~~<sup>which</sup> also includes:

- XML schemas: <http://docs.oasis-open.org/emergency/edxl-de/v2.0/csprd03/schema/2/schema/>
- XML examples: <http://docs.oasis-open.org/emergency/edxl-de/v2.0/csprd03/examples/2/examples/>

### Related work:

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- *Emergency Data Exchange Language (EDXL) Distribution Element, v. 1.0*. 01 May, 2006. OASIS Standard. [http://docs.oasis-open.org/emergency/edxl-de/v1.0/EDXL-DE\\_Spec\\_v1.0.pdf](http://docs.oasis-open.org/emergency/edxl-de/v1.0/EDXL-DE_Spec_v1.0.pdf)

This specification is related to:

- -Emergency Data Exchange Language (EDXL) Hospital AVailability Exchange v1.0. Latest version. [http://docs.oasis-open.org/emergency/edxl-have/v1.0/emergency\\_edxl\\_have-1.0.html](http://docs.oasis-open.org/emergency/edxl-have/v1.0/emergency_edxl_have-1.0.html)
- -Emergency Data Exchange Language (EDXL) Resource Messaging v1.0. Latest version. <http://docs.oasis-open.org/emergency/edxl-rm/v1.0/EDXL-RM-SPEC-V1.0.html>
- -Emergency Data Exchange Language Common Types v1.0. Latest version. <http://docs.oasis-open.org/emergency/edxl-ct/v1.0/edxl-ct-v1.0.html>
- Emergency Data Exchange Language Customer Information Quality v1.0. Latest version. <http://docs.oasis-open.org/emergency/edxl-ciq/v1.0/edxl-ciq-v1.0.html>

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#### Abstract:

This Distribution Element 2.0 (DE 2.0) specification describes a standard message distribution format for data sharing among emergency information systems. The DE 2.0 serves two important purposes: (1) The DE 2.0 allows an organization to wrap separate but related pieces of emergency information, including any of the EDXL message types, into a single “package” for easier and more useful distribution; (2) The DE 2.0 allows an organization to “address” the package to organizations or individuals with specified roles, located in specified locations or those interested in specified keywords. This version of the DE expands the ability to use local community-defined terms, uses a profile of the Geographic Markup Language (GML), follows best practices for naming conventions, provides the capability to link content objects, and is reorganized for increased flexibility and reuse of common types. The DE 2.0 packages and addresses emergency information for effective distribution with improved standardization and ability to be tailored for user needs.

(1) The DE 2.0 allows an organization to wrap separate but related pieces of emergency information, including any of the EDXL message types, into a single “package” for easier and more useful distribution;

(2) The DE 2.0 allows an organization to “address” the package to organizations or individuals with specified roles, located in specified locations or those interested in specified keywords.

This version of the DE expands the ability to use local community-defined terms, uses a profile of the Geographic Markup Language (GML), follows best practices for naming conventions, provides the capability to link content objects, supports extensions, and is reorganized for increased flexibility and reuse of common types. The DE 2.0 packages and addresses emergency information for effective distribution with improved standardization and ability to be tailored for user needs.

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# 1 Introduction

## 1.1 Purpose

The primary purpose of the Distribution Element 2.0 is to facilitate the routing of any properly formatted emergency message to recipients. The Distribution Element may be thought of as a "container". It provides the information to route "payload" message sets (such as Alerts or Resource Messages), by including key routing information such as distribution type, geography, incident, and sender/recipient Ids.

The DE 2.0 specification joins the published [suite of Emergency Data Exchange Language \(EDXL\) standards](#). The EDXL suite of standards. The Emergency Data eXchange Language suite of standards continuing goal is to facilitate emergency information sharing and data exchange across the local, state, tribal, national and non-governmental organizations of different professions that provide emergency response and management services. EDXL accomplishes this goal by focusing on the standardization of specific messages (messaging interfaces) to facilitate emergency communication and coordination particularly when more than one profession or governmental jurisdiction is involved.

The published suite of EDXL Standards includes:

- The Common Alerting Protocol v1.2 specification (EDXL-CAP)
- The Distribution Elements specification v1.0 (EDXL-DE)
- The Hospital AVailability Exchange specification v1.0 (EDXL-HAVE)
- The Resource Messaging specification v1.0 (EDXL-RM)
- The Situation Reporting v1.0 (EDXL-SitRep)

## 1.2 History

The Disaster Management (DM) eGov Initiative of the Department of Homeland Security (DHS) determined in 2004 to launch a project to develop interagency emergency data communications standards. It called together a group of national emergency response practitioner leaders and sought their guidance on requirements for such standards. In June, 2004 the first such meeting identified the need for a common distribution element for all emergency messages. Subsequent meetings of a Standards Working Group developed detailed requirements and a draft specification for such a distribution element (DE).

During the same period the DM Initiative was forming a partnership with industry members of the Emergency Interoperability Consortium (EIC) to cooperate in the development of emergency standards. EIC had been a leading sponsor of the Common Alerting Protocol (CAP). Both organizations desired to develop an expanded family of data formats for exchanging operational information beyond warning.

EIC members participated in the development of the DE, and in the broader design of the design of a process for the development of additional standards. This was named Emergency Data Exchange Language (EDXL).

The goal of the EDXL project is to facilitate emergency information sharing and data exchange across the local, state, tribal, national and non-governmental organizations of different professions that provide emergency response and management services. EDXL will accomplish this goal by focusing on the standardization of specific messages (messaging interfaces) to facilitate emergency communication and coordination particularly when more than one profession is involved. It is not just an "emergency management" domain exercise.

41 It is a national effort including a diverse and representative group of local, state and federal emergency  
42 response organizations and professionals, following a multi-step process. Just as a data-focused effort  
43 targets shared data elements, the EDXL process looks for shared message needs, which are common  
44 across a broad number of organizations. The objective is to rapidly deliver implementable standard  
45 messages, in an incremental fashion, directly to emergency response agencies in the trenches, providing  
46 seamless communication and coordination supporting each particular process. The effort first addresses  
47 the most urgent needs and proceeds to subsequent message sets in a prioritized fashion. The goal is to  
48 incrementally develop and deliver standards.

49 EDXL is intended as a suite of emergency data message types including resource queries and requests,  
50 situation status, message routing instructions and the like, needed in the context of cross-disciplinary,  
51 cross-jurisdictional communications related to emergency response.

52 The priorities and requirements are created by the DM EDXL Standards Working Group (SWG) which is a  
53 formalized group of emergency response practitioners, technical experts, and industry.

54 The original draft DE specification was trialed by a number of EIC members starting in October, 2004. In  
55 November, 2004, EIC formally submitted the draft to the OASIS Emergency Management Technical  
56 Committee for standardization.

57 Since its official release, the DE has been adopted and used by a number of communities and  
58 applications and as a result, a few significant enhancements were recommended. The OASIS  
59 Infrastructure Framework Subcommittee took on the task of assembling the list of suggestions,  
60 considering potential solutions, and recommending an evolved version DE 2.0. This document describes  
61 the DE 2.0 and contains references to the schema and examples for download.

## 62 1.3 Structure of the EDXL Distribution Element

63 The EDXL Distribution Element (DE) comprises an `<edxlDistribution>` element as described hereafter,  
64 optional `<targetArea>` elements describing geospatial or political target area for message delivery, and a  
65 set of `<cEDXLDistribution>` element as described hereafter, optional `<TargetArea>` elements describing  
66 geospatial or political target area for message delivery, and a set of `<ContentObject>` elements each  
67 containing specific information regarding a particular item of content. The included content may be any  
68 XML or other content type or a URI to access the content.

69 The `<edxlEDXLDistribution>` block may be used without content to form the body of a routing query to, or  
70 response from, a directory service.

### 71 1.3.1 `<edxlEDXLDistribution>`

72 The `<edxlEDXLDistribution>` element asserts the originator's intent as to the dissemination of that  
73 particular message or set of messages.

74 Note that use of the `<edxlEDXLDistribution>` element does not guarantee that all network links and nodes  
75 will implement the asserted dissemination policy or that unintended disclosure will not occur. Where  
76 sensitive information is transmitted over distrusted networks, it should be encrypted in accordance with  
77 the Web Services Security (WSS) standard [http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-  
78 soap-message-security-1.0.pdf](http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0.pdf) with any updates and errata published by the OASIS Web Services  
79 Security Technical Committee [http://www.oasis-open.org/committees/tc\\_home.php?wg\\_abbrev=wss](http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wss), or  
80 some other suitable encryption scheme.

### 81 1.3.2 `<dDescriptor>`

82 The `<descriptor>` element enables the user to describe the message with information useful for routing  
83 the message, including elements such as `senderRole`, `recipientRole` and `kDescriptor` element enables



84 the user to describe the message with information useful for routing the message, including elements  
85 such as `SenderRole`, `RecipientRole` and `Keyword`.

86

### 87 **1.3.3 <tTargetArea>**

88 The `<targetArea>` is a container element for a geospatial or political area representing the source, target,  
89 or other area relevant for distributing the message content. It contains data necessary to the originator's  
90 intent, based on location targeting, as to the dissemination of that particular message or set of messages.  
91 Multiple `<targetArea>` elements are allowed and can be grouped under a `<targetAreas>` element,  
92 specifying the `<areaKind>` and the type of `<areaGrouping>`, such as union or intersection . If multiple  
93 `<targetArea>` elements are used, then the order top-to-bottom represents precedence, with the top  
94 `<tTargetArea>` is a container element for a geospatial or political area representing the source, target, or  
95 other area relevant for distributing the message content. It contains data necessary to the originator's  
96 intent, based on location targeting, as to the dissemination of that particular message or set of messages.  
97 Multiple `<TargetArea>` elements are allowed and can be grouped under a `<TargetAreas>` element,  
98 specifying the `<AreaKind>` and the type of `<AreaGrouping>`, such as union or intersection . If multiple  
99 `<TargetArea>` elements are used, then the order top-to-bottom represents precedence, with the top  
100 `<TargetArea>` preferred.

### 101 **1.3.4 <cContentObject>**

102 The `<contentObject>` is a container element for specific messages. The `<contentObject>` element MUST  
103 either contain a `<contentXML>` content container or a `<otherContent>` container. Additional elements  
104 (metadata) used for specific distribution of the `<contentObject>` payload or hints for processing the  
105 payload are also present in the `<cContentObject>` is a container element for specific messages. The  
106 `<ContentObject>` element MUST either contain a `<ContentXML>` content container or a `<OtherContent>`  
107 container. Additional elements (metadata) used for specific distribution of the `<ContentObject>` payload or  
108 hints for processing the payload are also present in the `<ContentObject>` container element.

### 109 **1.3.5 ValueLists and Defaults**

110 The EDXL-DE 2.0 uses a ValueList structure to enable communities to have user-defined lists of values  
111 for elements such as `senderRole`, `recipientRole`, `keywordsSenderRole`, `DistributionStatus`, `Confidentiality`,  
112 and many others. The first example is a user-defined Valuelist specifying recipient roles:

```
113 <recipientRole>  
114 <ct:ValueListURI>urn:myagency:gov:sensors:recipientRole</ct:ValueListURI>  
115 <ct:Value>Situational Awareness Apps</ct:Value>  
116 <ct:Value>Warning Devices</ct:Value>  
117 </rRecipientRole>  
118 —<ct:ValueListURI>urn:myagency:gov:sensors:recipientRole</ct:ValueListURI>  
119 —<ct:Value>Situational Awareness Apps</ct:Value>  
120 —<ct:Value>Warning Devices</ct:Value>  
121 </RRecipientRole>
```

122 This first example contains two recipient roles, one role whose value is “Situational Awareness Apps” and  
123 one role whose value is “Warning Devices”. These are notional roles created for this example. The roles  
124 are identified as values from a list whose unique Uniform Reference Identifier (URI) is  
125 “urn:myagency:gov:sensors:recipientRole”. When using a ValueList the user can specify a user-  
126 defined list by URI (either using the “urn:...” format or the more familiar “http://...” format) and then include  
127 user-defined values from that list. This ValueList structure has several advantages, the ValueList: (a)  
128 provides flexibility for local communities to use community-defined terms and vocabulary; (b) allows for  
129 the external maintenance of local or standardized lists; and (c) avoids the problems inherent in attempting  
130 to constantly update hardcoded enumerations in a specification.

131 | The ValueList is supplemented for many of the EDXL-DE 2.0 elements with an optional default list and  
132 | values. These defaults are useful when no community-defined or standardized lists are available. This  
133 | second example is a default for a ValueList specifying the type or kind of DE 2.0 message:

```
134 |     <DistributionKind>  
135 |     <DistributionKindDefault>  
136 |     <ct:ValueListURI>urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:DistributionType</ct  
137 |     :ValueListURI>  
138 |     <ct:Value>Report</ct:Value>  
139 |     </DistributionKindDefault>  
140 | </DistributionKind>
```

141 | This example specifies a default value of “Report” from the default list whose URI is  
142 | “urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:DistributionType”. When utilizing the default, a  
143 | specific URI must be used and only the specified values can be included. The default URIs and values  
144 | are specified in the schema and mentioned in the data dictionary, where applicable.

145 | The EDXL-DE 2.0 ValueList and default mechanism provide a reasonable compromise between allowing  
146 | flexibility for using local or standardized lists and enabling the convenience of utilizing default values with  
147 | schema validation as needed.

### 148 | **1.3.6 Linking Content Objects and Other DE 2.0 Components**

149 | A new feature of the EDXL-DE 2.0 is the ability to specify links between content objects. This linking  
150 | ability is a useful new feature of the DE 2.0, allowing users to specify meaningful connections among  
151 | content objects.

152 | For example, if a DE 2.0 message contains two alerts and three images, it's now possible to specify by  
153 | links that two of the images go with the first alert and the third image is tied to the other alert.

154 | The linking feature can also be used to link separable parts of a DE 2.0 message. These separable parts  
155 | are the global elements, EDXLDistribution, Descriptor, Content, ContentDescriptor, and ContentObject.

156 | For example, the new EDXL-DE 2.0 allows the Descriptor portion of the DE 2.0 to be used independently  
157 | of the Content portion of the DE 2.0, as would be commonly done when using a “wrapper” other than the  
158 | DE-provided EDXLDistribution element. In a SOAP message, the DE 2.0 Descriptor might appear in the  
159 | SOAP header while the DE 2.0 Content appears in the SOAP body. If needed or desired, a link can be  
160 | used to tie the Descriptor to the Content to make the connection between the two explicit. The new DE  
161 | 2.0 linking feature supports two use cases: one where the user wants to show a connection between or  
162 | among content objects and the other where the user wants to explicitly link other separable DE 2.0  
163 | components.

164 | The new linking feature is enabled using the W3C standard Xlink. For example, here is a link tying a DE  
165 | 2.0 Descriptor element to a DE 2.0 Content element:

```
166 |     <de:Link xlink:from="de_descriptor" xlink:to="de_content"  
167 |     xlink:arcrole="http://www.oasis.org/de/arcroles/isDescriptorOf" xlink:title="is Descriptor of"/>
```

168 | Here are a few examples linking content objects:

```
169 |     <de:Link xlink:from="contentObject_1" xlink:to="contentObject_2"  
170 |     xlink:arcrole="http://www.oasis.org/de/arcroles/isImageOf" xlink:title="is Image of"/>
```

```
171 |     <de:Link xlink:from="contentObject_3" xlink:to="contentObject_4"  
172 |     xlink:arcrole="http://www.oasis.org/de/arcroles/isVideoOf" xlink:title="is Video of"/>
```

173 <de:Link xlink:from="contentObject\_5" xlink:to="contentObject\_6"  
174 xlink:arcrole="http://www.oasis.org/de/arcroles/isAudioOf" xlink:title="is Audio of"/>

176 Xlink is a standard specification providing several attributes which can be added to elements to support  
177 linking. In the examples above, the “from” and “to” attributes reference the values of xlink label attributes  
178 that have been added to the DE 2.0 components or content objects respectively. In the second example,  
179 the link is referring to a content object whose xlink:label attribute has been set to “contentObject\_2” and is  
180 also referring to another content object whose xlink:label attribute has been set to “contentObject\_1”. By  
181 using these labels as element identifiers, the link connects one to another. Users can specify user-defined  
182 labels and roles, and thereby create meaningful connections among content objects or among DE 2.0  
183 components.

184 This section is merely an introduction to the linking concept. For more details, see the examples and also  
185 see the Xlink specification itself and referenced tutorials.

### 186 **1.3.7 Common Types**

187 Several Element Types, such as TargetArea, borrow re-usable elements from the EDXL Common Types  
188 that apply to and support multiple areas of the DE 2.0 messages. For instance TargetArea relies on the  
189 EDXL-CIQ profile for geopolitical info and on the EDXL-GSF profile for geographical information.  
190 The Supporting Elements Model distinguishes three groups of elements: CommonTypes (EDXL-CT),  
191 Contact Information (EDXL-CIQ) and Location Information (EDXL-GSF).

192 The following elements are used in this specification and can be found at the locations cited in the norm-  
193 ative references in Section 1.6 below.

Supporting Element	Defined In
EDXLLocationType	EDXL-CT
EDXLGeoLocationType	EDXL-GSF
EDXLGeoPoliticalLocationType	EDXL-CT
ValueListURI	EDXL-CT
Value	EDXL-CT

194

### 195 **1.3.8 Community Extensions**

196 The DE 2.0 now supports supplemental inclusion of community-defined sets of name/value pairs, referred  
197 to here as “Community Extensions” or simply “Extensions” for short. For example, if you send a DE  
198 message with an alert or image about an earthquake, you might want to include some specific  
199 earthquake data, like the magnitude and depth of the earthquake. There are no earthquake-specific fields  
200 in the DE; however, your community can extend the DE to include that information which you represent  
201 as a set of parameter elements specifically designed to represent earthquake data. The “Community  
202 Extensions” concept solves several major problems for improving information sharing and developing  
203 standards for the emergency management community. First, the nature of emergencies is that the  
204 unexpected will happen and emergency managers need flexibility to send whatever information is  
205 needed. Second, an emergency begins and often stays local, so local authorities and users need control  
206 to send the information they decide is important to address the current emergency. Third, communities  
207 need the opportunity to explore potential new standards. The parameter name/value extension  
208 mechanism, along with the registration and best practice guidance, provides an on-ramp for communities

209 | [to determine what works well for them. Those Community Extensions which are most successful can be](#)  
210 | [incorporated formally into future standards.](#)

211 |

## 212 | **1.4 Applications of the EDXL Distribution Element**

213 | The primary use of the EDXL Distribution Element is to identify and provide information to enable the  
214 | routing of encapsulated payloads, called Content Objects. It is used to provide a common mechanism to  
215 | encapsulate content information.

## 216 | **1.5 Terminology**

217 | The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD  
218 | NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this specification are to be interpreted as de-  
219 | scribed in [IETF RFC 2119](#).

220 | In addition, within this Specification, the keyword "CONDITIONAL" should be interpreted as potentially  
221 | "REQUIRED" or "OPTIONAL" depending on the surrounding context. The term payload refers to some  
222 | body of information contained in the distribution element. The term "REQUIRED" means that empty  
223 | elements or NULL values are NOT allowed.

## 224 | **1.6 Normative References**

### 225 | **[RFC 2119]**

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

### 226 | **[RFC2046]**

227 | N. Freed, *Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types*,  
228 | <http://www.ietf.org/rfc/rfc2046.txt>, IETF RFC 2046, November 1996.

### 229 | **[RFC2119]**

230 | S. Bradner, *Key words for use in RFCs to Indicate Requirement Levels*,  
231 | <http://www.ietf.org/rfc/rfc2119.txt>, IETF RFC 2119, March 1997.

### 232 | **[RFC3066]**

233 | H. Alvestrand, *Tags for the Identification of Languages*,  
234 | <http://www.ietf.org/rfc/rfc3066.txt>, IETF RFC 3066, January 2001.

### 235 | **[WGS 84]**

236 | National Geospatial Intelligence Agency, Department of Defense World Geodetic  
237 | System 1984, [http://earth-info.nga.mil/GandG/publications/tr8350.2/tr8350\\_2.html](http://earth-info.nga.mil/GandG/publications/tr8350.2/tr8350_2.html),  
238 | NGA Technical Report TR8350.2, January 2000.

### 239 | **[XML 1.0]**

240 | T. Bray, *Extensible Markup Language (XML) 1.0 (Third Edition)*,  
241 | <http://www.w3.org/TR/REC-xml/>, W3C REC-XML-20040204, February 2004.

### 242 | **[namespaces]**

243 | T. Bray, *Namespaces in XML*, <http://www.w3.org/TR/REC-xml-names/>, W3C REC-  
244 | xml-names-19990114, January 1999.

### 245 | **[dateTime]**

246 | N. Freed, *XML Schema Part 2: Datatypes Second Edition*,  
247 | <http://www.w3.org/TR/xmlschema-2/#dateTime>, W3C REC-xmlschema-2, October  
248 | 2004.

- 249 **[xlink]** S. DeRose et al, XML Linking Language (Xlink) Version 1.1,  
250 <http://www.w3.org/TR/xlink11/>, W3C REC-xlink11, May 2010.  
251
- 252 **[EDXL-CIQ]** W. Joerg, OASIS Committee Specification Draft Emergency Data Exchange  
253 Language Customer Information Quality [http://docs.oasis-open.org/emergency/edxl-](http://docs.oasis-open.org/emergency/edxl-ciq/v1.0/csd02/)  
254 [ciq/v1.0/csd02/](http://docs.oasis-open.org/emergency/edxl-ciq/v1.0/csd02/) , September, 2011  
255
- 256 **[EDXL-CT]** W. Joerg, OASIS Committee Specification Draft Emergency Data Exchange  
257 Language Common Types <http://docs.oasis-open.org/emergency/edxl-ct/v1.0/csd02/>  
258 , November, 2011  
259
- 260 **[EDXL-GSF]** W. Joerg, OASIS Committee Specification Draft Emergency Data Exchange  
261 Language GML Simple Features [http://docs.oasis-open.org/emergency/edxl-](http://docs.oasis-open.org/emergency/edxl-gsf/v1.0/csd01/)  
262 [gsf/v1.0/csd01/](http://docs.oasis-open.org/emergency/edxl-gsf/v1.0/csd01/) , September, 2011[  
263
- 264 **[EDXL-HAVE]** Emergency Data Exchange Language (EDXL) Hospital AVailability Exchange..  
265 OASIS Standard 01 [http://docs.oasis-](http://docs.oasis-open.org/emergency/edxlhave/v1.0/emergency_edxl_have-1.0.html)  
266 [open.org/emergency/edxlhave/v1.0/emergency\\_edxl\\_have-1.0.html](http://docs.oasis-open.org/emergency/edxlhave/v1.0/emergency_edxl_have-1.0.html), 1 November  
267 2008  
268
- 269 **[EDXL-RM]** Emergency Data Exchange Language (EDXL) Resource Messaging. OASIS  
270 Standard. V1.0. [http://docs.oasis-open.org/emergency/edxl-rm/v1.0/errata/EDXL-](http://docs.oasis-open.org/emergency/edxl-rm/v1.0/errata/EDXL-RM-v1.0-OS-errata-os.html)  
271 [RM-v1.0-OS-errata-os.html](http://docs.oasis-open.org/emergency/edxl-rm/v1.0/errata/EDXL-RM-v1.0-OS-errata-os.html), 1 November 2008  
272
- 273 **[EDXL-SitRep]** Emergency Data Exchange Language Situation Reporting (EDXL-SitRep) Version  
274 1.0. 4 May 2012. OASIS Committee Specification Draft 01 / Working Draft 18.  
275

## 276 **1.7 Non-normative References**

- 277 **[EDXL General Functional Requirements]**
- 278 *EDXL General Functional Requirements*, [http://www.oasis-](http://www.oasis-open.org/committees/document.php?document_id=10031&wg_abbrev=emergency)  
279 [open.org/committees/document.php?document\\_id=10031&wg\\_abbrev=emergency](http://www.oasis-open.org/committees/document.php?document_id=10031&wg_abbrev=emergency),  
280 November 2004.  
281
- 282 **[EDXL Distribution Element Implementer's Guide]**
- 283 *EDXL Distribution Element Implementer's Guide*, [http://www.oasis-](http://www.oasis-open.org/committees/document.php?document_id=14120&wg_abbrev=emergency)  
284 [open.org/committees/document.php?document\\_id=14120&wg\\_abbrev=emergency](http://www.oasis-open.org/committees/document.php?document_id=14120&wg_abbrev=emergency),  
285 August 2005.  
286

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## 287 **2 Design Principles & Concepts (non-normative)**

### 288 **2.1 Design Philosophy**

289 Below are some of the guiding principles of the Distribution Element:

- 290 1. Provide an Open Container Model to enable dissemination of one or more emergency messages
- 291 2. Provide flexible mechanisms to inform message routing and/or processing decisions
- 292 3. Enable dissemination of messages based on geographic delivery area
- 293 4. Use and re-use of data content and models developed by other initiatives
- 294 5. Support business process-driven specific messaging needs across emergency professions
- 295 6. Support everyday events and incident preparedness, as well as disasters
- 296 7. Facilitate emergency information sharing and data exchange across the local, state, tribal,  
297 national and non-governmental organizations of different professions that provide emergency  
298 response and management services
- 299 8. Multi-use format - One message schema supports multiple message types (e.g., alert / update /  
300 cancellations / acknowledgments / error messages) in various applications (actual / exercise /  
301 test / system message.)

### 302 **2.2 Requirements for Design**

303 The Distribution Element specification should:

- 304 1. Define a compound XML structure (or an equivalent single structure if transcoded into another  
305 format) including the required and optional elements defined below.
- 306 2. Specify a desired delivery area, expressed in geospatial coordinates or using  
307 political/administrative codes.
- 308 3. Allow the ability to encapsulate a payload or set of payloads
- 309 4. Take a modular approach to the enumerations of element values which may evolve over time,  
310 e.g. by referring to a separate schema for those enumerations.
- 311 5. Specify unique distribution and sender identifiers
- 312 6. Specify the date and time the distribution was sent
- 313 7. Specify the actionability of the distribution message (e.g., real-world, test, exercise)
- 314 8. Specify the functional type of the distribution message (e.g., report, request, update, cancellation,  
315 etc.)

- 316 9. Specify that the following elements may be present in a valid payload:
- 317 (a) A specification of the format of the distribution message (e.g., the URI of an XML Schema for  
318 the message)
- 319 (b) The functional role and/or type of the sender of the distribution message
- 320 (c) One or more functional role and/or type of desired recipients of the distribution message
- 321 (d) One or more types of response activity involved
- 322 (e) A reference to the type of incident
- 323 (f) One or more characterizations of the etiology of the subject event or incident (e.g., terrorism,  
324 natural, under investigation, etc.)
- 325 (g) The incident name or other identifier of one or more event or incident
- 326 (h) A reference to one or more response types.
- 327 (i) One or more specific recipient addresses (as a URI).
- 328 (j) Specify an assertion of the confidentiality level of the combined payloads.
- 329 10. In addition, the Content Object element contained within the Distribution Element SHOULD:
- 330 (a) Allow the encapsulation of one or more payloads in each of the Content Object elements.
- 331 (b) Specify the functional role and/or type of the sender of each payload
- 332 (c) Specify one or more functional roles and/or types of desired recipients of each payload
- 333 (d) Specify an assertion of the confidentiality level of each payload.
- 334 11. Provide or refer to specific lists (enumerations) of values and definitions for:
- 335 (a) Types of incidents
- 336 (b) Types of hazards and/or events
- 337 (c) Types of agencies
- 338 (d) Types of response activity
- 339 (e) The functional role and/or type of the sender
- 340 (f) The functional roles and/or types of desired recipients
- 341 (g) The incident name or other identifier of one or more event or incident.

## 342 **2.3 Example Usage Scenarios**

343 Note: The following examples of use scenarios were used as a basis for design and review of the EDXL  
344 Distribution Element Message format. These scenarios are non-normative and not intended to be  
345 exhaustive or to reflect actual practices.

### 346 **2.3.1 Distribution of Emergency Messages or Alerts Based on Geographic** 347 **Delivery Area and Incident Type**

348 The terror alert level has been raised to RED. Credible intelligence indicates that terrorist groups in the  
349 Mid-Atlantic region are seeking to conduct an attack in the next 48 hours. The Department of Homeland  
350 Security sends an emergency alert message, and using the Distribution Element, distributes it to all  
351 emergency agencies in the specified area.

### 352 **2.3.2 Encapsulation and Distribution of One or More Emergency** 353 **Messages or Alerts or Notifications**

354 A Radiological sensor triggered at a prominent Tunnel toll booth. Radiation alarm levels indicates possible  
355 dirty bomb. Authorities decide to send multiple messages to a number of jurisdictions. The user sends an  
356 EDXL Distribution Element with two encapsulated CAP messages. The first one notifies the area where  
357 the sensor has been triggered. The second one is an alert to emergency response agencies that the state  
358 Emergency Operation Center (EOC) has been activated, and requests the agencies to be on alert.

### 359 **2.3.3 Distribution of Resource Messages or Reports**

360 The Local EOC has a need for additional resource/support, but is unsure what specifically to request. A  
361 free-form request for information and resource availability is prepared, and is sent to the state EOC and  
362 other organizations (person to person) using the Distribution Element. The Local EOC receives an  
363 acknowledgment message from the State EOC, as well as a request for Information on additional details  
364 of the requested resource. Both of these messages are contained within a single Distribution Element.

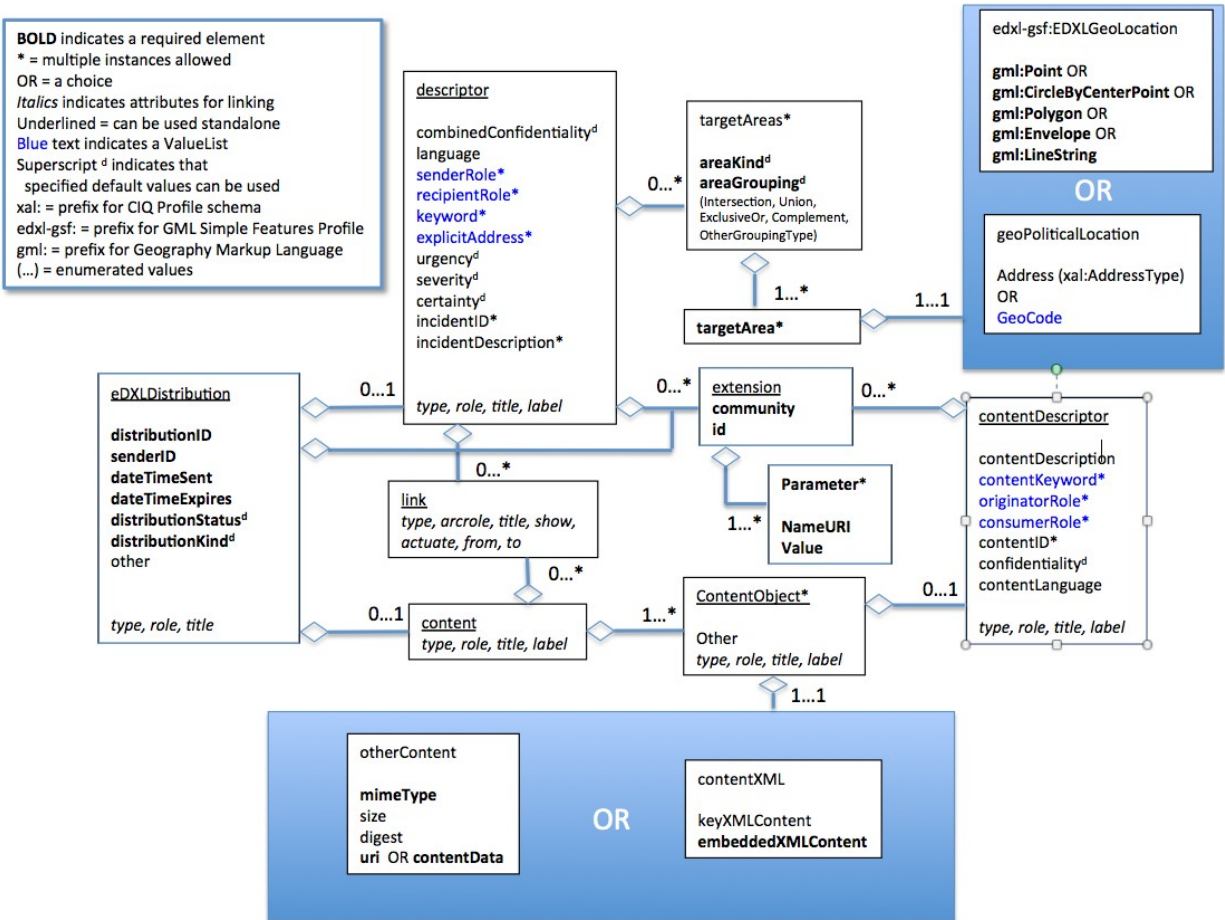
### 365 **2.3.4 Distribution of Well-Formed XML Messages**

366 A huge crash, involving a car and a HAZMAT truck, occurs at a busy junction on an inter-state freeway.  
367 Separate automatic notifications of both the car crash and the HAZMAT carrier are sent using the  
368 Vehicular Emergency Data Set (VEDS), contained in the Distribution Element. The Transportation  
369 Management Center (TMC) shares information (related to the above incident) with the adjacent TMC,  
370 using the IEEE 1512 Incident Management Message Set. These sets of messages are exchanged using  
371 the EDXL Distribution Element.



### 3 EDXLDistribution Element Structure (normative)

#### 3.1 Document Object Model



376

#### 3.2 Data Dictionary

##### 3.2.1 EDXLDistribution Element and Sub-elements

379 | The Distribution Element, <edxlEDXLDistribution> is the container element for all data necessary to the  
 380 | originator's intent as to the dissemination of the contained message or set of messages.

<b>Element</b>	<b>edxlDistribution</b>
<b>Type</b>	XML Structure
<b>Usage</b>	<b>CONDITIONAL, MUST</b> be used once and only once when an EDXL envelope is desired, <u>top level container</u>
<b>Definition</b>	<u>A container of all of the elements related to the distribution of the content messages.</u>
<b>Comments</b>	<u>1. The &lt;edxlDistribution&gt; element includes administrative envelope information as well as</u>

	<p>optionally one &lt;descriptor&gt; block and one &lt;content&gt; block.</p> <p>2. Use of the &lt;edxLDistribution&gt; element does not guarantee that all network links and nodes will implement the asserted dissemination policy or that unintended disclosure will not occur. Where sensitive information is transmitted over untrusted networks, it should be encrypted in accordance with the Web Services Security (WSS) standard (<a href="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0.pdf">http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0.pdf</a>) with any updates and errata published by the OASIS Web Services Security Technical Committee (<a href="http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wss">http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wss</a>), or some other suitable encryption scheme.</p> <p>3. This element can be the source or destination for a link. See Section 1.3.5.</p>
Sub-elements	<p><a href="#">distributionID [1..1]</a></p> <p><a href="#">senderID [1..1]</a></p> <p><a href="#">dateTimeSent [1..1]</a></p> <p><a href="#">dateTimeExpires [1..1]</a></p> <p><a href="#">distributionStatus [1..1]</a></p> <p><a href="#">distributionKind [1..1]</a></p> <p><a href="#">descriptor [0..1]</a></p> <p><a href="#">content [0..1]</a></p> <p><a href="#">other [0..*]</a></p>
Used In	top level element
Element	<b>EDXLDistribution</b>
Type	XML-Structure
Usage	<b>CONDITIONAL</b> , MUST be used once and only once when an EDXL envelope is desired, top-level container—
Definition	A container of all of the elements related to the distribution of the content messages.—
Comments	<p>1. The &lt;EDXLDistribution&gt; element includes administrative envelope information as well as optionally one &lt;Descriptor&gt; block and one &lt;Content&gt; block.</p> <p>2. Use of the &lt;EDXLDistribution&gt; element does not guarantee that all network links and nodes will implement the asserted dissemination policy or that unintended disclosure will not occur. Where sensitive information is transmitted over untrusted networks, it should be encrypted in accordance with the Web Services Security (WSS) standard (<a href="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0.pdf">http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0.pdf</a>) with any updates and errata published by the OASIS Web Services Security Technical Committee (<a href="http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wss">http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wss</a>), or some other suitable encryption scheme.</p> <p>3. This element can be the source or destination for a link. See Section 1.3.5.</p>

Sub-elements	DistributionID [1..1] SenderID [1..1] DateTimeSent [1..1] DateTimeExpires [1..1] DistributionStatus [1..1] DistributionKind [1..1] DistributionReference [0..*] Descriptor [0..1] Content [0..1] Other [0..*]
Used In	top-level element

381

Element	Descriptor
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY be used once and only once; can be used as a top-level element when used outside of the EDXLDistribution envelope.
Definition	A container of all of the substantive elements related to describing the distribution of the content messages as a whole.
Comments	1. This element can be the source or destination for a link. See Section 1.3.5.
Sub-elements	CombinedConfidentiality [0..1] Language [0..1] SenderRole [0..*] RecipientRole [0..*] Keyword [0..*] ExplicitAddress [0..*] TargetAreas [0..*] Urgency [0..1] Severity [0..1] Certainty [0..1] IncidentID [0..*] IncidentDescription [0..*]

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	Link [0..*]
Used In	EDXLDistribution or independently if an alternative envelope is used.

<b>Element</b>	<b>Content</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY be used once and only once; may be used outside of EDXLDistribution if an alternative envelope to <EDXLDistribution> is used.
Definition	A container for the ContentObject and any Links among content objects
Comments	1.The <Content> block must contain one or more <ContentObject> blocks and optionally one ore more <Link> elements.  2.This element can be the source or destination for a link. See Section 1.3.5.
Sub-elements	ContentObject [1..*]  Link [0..*]
Used In	EDXLDistribution or independently if an alternative envelope is used.

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<b>Element</b>	<b>Link</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY be used multiple times
Definition	A method for linking <ContentObject> elements or other elements
Comments	1.The Link element includes attributes from the xlink:arcLink attributeGroup, consisting of type="arc", xlink:arcrole, xlink:title , xlink:show, xlink:actuate, xlink:from, and xlink:to. The role attribute indicates a property of the resource, the title indicates a human-readable description of the resource, and the label attribute provides a way for an arc-type element to refer to it. The xlink:from attribute defines the start of a link by referencing a resource's "label" attribute while the xlink:to attribute defines the endpoint of a link by referencing the ending resource label. Since label attributes are available in the DE Content, ContentObject, and Descriptor elements, the Link element can be used to link any of these elements. For example, content objects can be linked to each other and to descriptor elements. The linkage is useful to associate content objects when multiple pieces of content are included in one DE or to link a descriptor to content when the two elements are separated, as when using an alternative envelope to the EDXLDistribution element, for example when using a SOAP envelope. For more information on xlink, see the XLINK specification referenced in Section 1.  2.—See Section 1.3.5 for a summary overview of the new DE linking capability.  3.—<Descriptor> elements can utilize the resourceLink attributes defined in Xlink 1.1.
Used In	Content  Descriptor

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<b>Element</b>	<b>DistributionID</b>
----------------	-----------------------

Type	ct:EDXLStringType
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The unique identifier of this distribution message.—
Comments	1.Uniqueness is assigned by the sender to be unique for that sender. 2.The identifier MUST be a properly formed —escaped if necessary— XML string. 3.The string length of the identifier MUST be less than 1024.
Used In	EDXLDistribution—

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<b>Element</b>	<b>SenderID</b>
Type	ct:EDXLStringType
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The unique identifier of the sender.—
Comments	1.Uniquely identifies human parties, systems, services, or devices that are all potential senders of the distribution message. 2.In the form actor@domain-name. 3.Uniqueness of the domain-name is guaranteed through use of the Internet Domain Name System, and uniqueness of the actor name enforced by the domain owner. 4.The identifier MUST be a properly formed —escaped if necessary— XML string.
Used In	EDXLDistribution—

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<b>Element</b>	<b>DateTimeSent</b>
Type	ct:EDXLDateTimeType
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The date and time the distribution message was sent.—
Comments	1. The Date Time combination must include the offset time for time zone. Must be in the restricted W3C format for the XML [dateTime] data type,— see ct:EDXLDateTimeType.
Used In	EDXLDistribution—

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<b>Element</b>	<b>DateTimeExpires</b>
Type	ct:EDXLDateTimeType
Usage	<b>REQUIRED</b> , MUST be used once and only once

Definition	The date and time the distribution message should expire.
Comments	1. The Date Time combination must include the offset time for time zone. Must be in the restricted W3C format for the XML [dateTime] data type, see ct:EDXLDateTimeType.
Used In	EDXLDistribution

<b>Element</b>	<b>descriptor</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY be used once and only once; can be used as a top level element when used outside of the edxIDistribution envelope.
Definition	A container of all of the substantive elements related to describing the distribution of the content messages as a whole.
Comments	1. This element can be the source or destination for a link. See Section 1.3.5.
Sub-elements	<p><a href="#">combinedConfidentiality [0..1]</a></p> <p><a href="#">language [0..1]</a></p> <p><a href="#">senderRole [0..*]</a></p> <p><a href="#">recipientRole [0..*]</a></p> <p><a href="#">keyword [0..*]</a></p> <p><a href="#">explicitAddress [0..*]</a></p> <p><a href="#">targetAreas [0..*]</a></p> <p><a href="#">urgency [0..1]</a></p> <p><a href="#">severity [0..1]</a></p> <p><a href="#">certainty [0..1]</a></p> <p><a href="#">incidentID [0..*]</a></p> <p><a href="#">incidentDescription [0..*]</a></p> <p><a href="#">link [0..*]</a></p> <p><a href="#">ext:extension [0..*]</a></p>
Used In	edxIDistribution or independently if an alternative envelope is used.
<b>Element</b>	<b>DistributionStatus</b>
Type	A choice between a user-defined value or a default value
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The action-ability of the message.
Comments	1. If the default value list is used, then the ValueListURI must be:

	<p>“urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:StatusType” and the Value must be one of:–</p> <ul style="list-style-type: none"> <li>a. Actual – "Real-world" information for action</li> <li>b. Exercise – Simulated information for exercise participants</li> <li>c. System – Messages regarding or supporting network functions</li> <li>d. Test – Discardable messages for technical testing only.–</li> </ul> <p>2. The status MUST be a properly formed –escaped if necessary– XML string.</p>
Sub-elements	Either StatusKindValueList or StatusKindDefault
Used In	EDXLDistribution–

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<b>Element</b>	<b>ext:extension</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY be used multiple times.
Definition	This element supports a “Community Extension”, a set of parameter name/value pairs representing information supplemental to the main body of the standard.
Comments	<p>1. The &lt;extension&gt; block is in the form of the example shown below:</p> <pre>&lt;ext:extension&gt;   &lt;ext:community&gt;http://mycommunity.org&lt;/ext:community&gt;   &lt;ext:id&gt;layer1&lt;/ext:id&gt;   &lt;ext:parameter&gt;     &lt;ext:nameURI&gt;http://mycommunity.org/layer1/urgency&lt;/ext:nameURI&gt;     &lt;ext:value&gt;Low&lt;/ext:value&gt;   &lt;/ext:parameter&gt; &lt;/ext:extension&gt;</pre> <p>2. Use of the &lt;extension&gt; block should be used for optional supplemental information. The elements with enumerated values provided in the main body of the standard provide the greatest interoperability; however, the &lt;extension&gt; block provides flexibility for local communities to utilize their own supplemental terminology and information when needed. See Section 1.3.8.</p>
Sub-elements	<p>community [1..1]</p> <p>id [1..1]</p> <p>parameter [1..*]</p> <p>    nameURI [1..1]</p> <p>    value [1..1]</p> <p>See Appendix C for the referenced extension schema</p>
Used In	descriptor contentDescriptor

<b>Element</b>	<b>StatusKindDefault</b>
Type	ct:StatusKindDefaultType
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	Specifies the default distribution status list and value, for example “Actual” or “Exercise”.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;StatusKindDefault&gt; &lt;ct:ValueListURI&gt;urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:StatusKind&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/StatusKindDefault&gt;</pre> <p>2. The Value must be Actual, Exercise, System, or Test</p>
Sub-elements	ct:ValueListURI ct:Value
Used In	DistributionStatus

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<b>Element</b>	<b>StatusKindValueList</b>
Type	ct:ValueKeyType
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	Specifies the distribution status of the message.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;StatusKindValueList&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/StatusKindValueList&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. One and only one instance of &lt;ct:Value&gt; MUST occur.</p>
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..1]
Used In	DistributionStatus

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<b>Element</b>	<b>DistributionKind</b>
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Type	A choice between a user-defined value or a default value
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The function of the message.—
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;DistributionType&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/DistributionType&gt;</pre> <p>The content of &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and the content of &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Only a single value may be specified</p> <p>3. If the default value list is used, the ValueListURI must be: "urn:oasis:names:tc:emergency:EDXL:DE2.0:Defaults:StatusType" and the Value must be one of:</p> <ul style="list-style-type: none"> <li>a. Report – New information regarding an incident or activity</li> <li>b. Update – Updated information superseding a previous message</li> <li>c. Cancel – A cancellation or revocation of a previous message</li> <li>d. Request – A request for resources, information or action</li> <li>e. Response – A response to a previous request</li> <li>f. Dispatch – A commitment of resources or assistance</li> <li>g. Ack – Acknowledgment of receipt of an earlier message</li> <li>h. Error – Rejection of an earlier message (for technical reasons)</li> <li>i. SensorConfiguration – These messages are for reporting configuration during power up or after Installation or Maintenance.</li> <li>j. SensorControl – These are messages used to control sensors/sensor concentrator components behavior.</li> <li>k. SensorStatus – These are concise messages which report sensors/sensor concentrator component status or state of health.</li> <li>l. SensorDetection – These are high priority messages which report sensor detections.</li> </ul> <p>4. The status MUST be a properly formed –escaped if necessary– XML string.</p>
Sub-elements	Either DistributionKindDefault or DistributionKindValueList
Used In	EDXLDistribution

<b>Element</b>	<b>content</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY be used once and only once; may be used outside of EDXLDistribution if an alternative envelope to <edxDistribution> is used.
Definition	A container for the contentObject and any links among content objects
Comments	1. The <content> block must contain one or more <contentObject> blocks and optionally one or more <link> elements.  2. This element can be the source or destination for a link. See Section 1.3.5.
Sub-elements	contentObject [1..*]  link [0..*]
Used In	EDXLDistribution or independently if an alternative envelope is used.
<b>Element</b>	<b>DistributionKindDefault</b>
Type	ct:DistributionDefaultType
Usage	<del><b>OPTIONAL</b>, MAY be used once and only once</del>
Definition	Specifies the default kind of distribution list and value, for example "Report" or "Update".
Comments	1. The list and associated value(s) are in the form:  <DistributionKindDefault> <ct:ValueListURI>urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:DistributionType</ct:ValueListURI> <ct:Value>value</ct:Value> </DistributionKindDefault>  2. The Value must be one of Report, Update, Cancel, Request, Response, Dispatch, Ack, Error, SensorConfiguration, SensorControl, SensorStatus, SensorDetection.
Sub-elements	ct:ValueListURI [1..1]  ct:Value [1..1]
Used In	DistributionKind

<b>Element</b>	<b>DistributionKindValueList</b>
Type	ct:ValueKeyType
Usage	<del><b>OPTIONAL</b>, MAY be used once and only once</del>
Definition	Specifies the kind of distribution of the message".

Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;DistributionKindValueList&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/DistributionKindValueList&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. One and only one instance of &lt;value&gt; MUST occur.</p>
Sub-elements	<p>ct:ValueListURI</p> <p>ct:Value</p>
Used In	DistributionKind

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402

<b>Element</b>	<b>link</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY be used multiple times
Definition	A method for linking <contentObject> elements or other elements
Comments	<p>1. <u>The link element includes attributes from the xlink:arcLink attributeGroup, consisting of type="arc", xlink:arcrole, xlink:title, xlink:show, xlink:actuate, xlink:from, and xlink:to. The role attribute indicates a property of the resource, the title indicates a human-readable description of the resource, and the label attribute provides a way for an arc-type element to refer to it. The xlink:from attribute defines the start of a link by referencing a resource's "label" attribute while the xlink:to attribute defines the endpoint of a link by referencing the ending resource label. Since label attributes are available in the DE content, contentObject, and descriptor elements, the link element can be used to link any of these elements. For example, content objects can be linked to each other and to descriptor elements. The linkage is useful to associate content objects when multiple pieces of content are included in one DE or to link a descriptor to content when the two elements are separated, as when using an alternative envelope to the edxIDistribution element, for example when using a SOAP envelope. For more information on xlink, see the XLINK specification referenced in Section 1.</u></p> <p>2. <u>See Section 1.3.5 for a summary overview of the new DE linking capability.</u></p> <p>3. <u>&lt;descriptor&gt; elements can utilize the resourceLink attributes defined in Xlink 1.1.</u></p>
Used In	<p>content</p> <p>descriptor</p>
<b>Element</b>	<b>CombinedConfidentiality</b>
Type	A choice between a user-defined value or a default value
Usage	<b>CONDITIONAL</b> , Must be present when confidentiality is used in a content object

Definition	Confidentiality of the combined distribution message's content.
Comments	<p>1. The list and associated value are in the form:</p> <pre>&lt;CombinedConfidentiality&gt;   &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt;   &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/CombinedConfidentiality&gt;</pre> <p>2. Only one value can be specified</p> <p>3. When present, the combined ContentObjects MUST use the same &lt;ct:ValueListURI&gt; where the values in the referenced list are ordered from highest confidentiality at the top to the lowest at the bottom.</p> <p>4. The &lt;CombinedConfidentiality&gt; indicates the confidentiality of the combined &lt;ContentObject&gt; sub-elements. Generally the combined confidentiality is the most restrictive of the &lt;Confidentiality&gt; elements in the container &lt;ContentObject&gt; element, but it can be more restrictive than any of the individual &lt;Confidentiality&gt; elements.</p> <p>5. The &lt;CombinedConfidentiality&gt; element MUST be present if a &lt;Confidentiality&gt; element is present in any of the &lt;ContentObject&gt; elements.</p> <p>6. The confidentiality MUST be a properly formed -escaped if necessary- XML string.</p> <p>7. If the default value list is used, the ValueListURI must be: "urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:ConfidentialityType" and the Value must be one of:</p> <ul style="list-style-type: none"> <li>a. Unclassified</li> <li>b. Classified</li> </ul>
Sub-elements	<p>ConfidentialityDefault [1..1]</p> <p>ConfidentialityValueList [1..1]</p>
Used In	Descriptor

403  
404

<b>Element</b>	<b>distributionID</b>
Type	ct:EDXLStringType
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The unique identifier of this distribution message.
Comments	<p>1. Uniqueness is assigned by the sender to be unique for that sender.</p> <p>2. The identifier MUST be a properly formed -escaped if necessary- XML string.</p>

	3.The string length of the identifier <b>MUST</b> be less than 1024.
Used In	<a href="#">edxIDistribution</a>
<b>Element</b>	<b>ConfidentialityDefault</b>
Type	ct:ConfidentialityDefaultType
Usage	<del>OPTIONAL, MAY be used once and only once</del>
Definition	Specifies the default confidentiality list and value, for example “Classified” or “Unclassified”.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;ConfidentialityDefault&gt; &lt;ct:ValueListURI&gt;urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:ConfidentialityType &lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/ConfidentialityDefault&gt;</pre> <p>2. The Value must be Classified or Unclassified</p>
Sub-elements	ct:ValueListURI ct:Value
Used In	<del>CombinedConfidentiality, Confidentiality</del>

405

<b>Element</b>	<b>senderID</b>
Type	ct:EDXLStringType
Usage	<b>REQUIRED</b> , <b>MUST</b> be used once and only once
Definition	The unique identifier of the sender.
Comments	<p>1. <u>Uniquely identifies human parties, systems, services, or devices that are all potential senders of the distribution message.</u></p> <p>2. <u>In the form actor@domain-name.</u></p> <p>3. <u>Uniqueness of the domain-name is guaranteed through use of the Internet Domain Name System, and uniqueness of the actor name enforced by the domain owner.</u></p> <p>4. <u>The identifier <b>MUST</b> be a properly formed -escaped if necessary- XML string.</u></p>
Used In	<a href="#">edxIDistribution</a>

406

<b>Element</b>	<b>ConfidentialityValueList</b>
Type	ct:ValueKeyType
Usage	<del>OPTIONAL, MAY be used once and only once</del>
Definition	Specifies the confidentiality of the message.

Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;ConfidentialityValueList&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt;&lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/ConfidentialityValueList&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. One and only one instance of &lt;ct:Value&gt; MUST occur.</p>
Sub-elements	<p>ct:ValueListURI [1..1]</p> <p>ct:Value [1..1]</p>
Used In	-CombinedConfidentiality, Confidentiality

407

<b>Element</b>	<b>dateTimeSent</b>
Type	ct:EDXLDateTimeType
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The date and time the distribution message was sent.
Comments	1. The Date Time combination must include the offset time for time zone. Must be in the restricted W3C format for the XML [dateTime] data type, see ct:EDXLDateTimeType.
Used In	edxIDistribution

408

<b>Element</b>	<b>Language</b>
Type	xsd:language
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	The primary language (but not necessarily exclusive) used in the payloads.
Comments	<p>1. Valid language values are supplied in the ISO standard [RFC3066].</p> <p>2. The language MUST be a properly formed -escaped if necessary- XML string.</p>
Used In	<p>Descriptor</p> <p>ContentObject</p>

409

<b>Element</b>	<b>dateTimeExpires</b>
Type	ct:EDXLDateTimeType
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The date and time the distribution message should expire.

<b>Comments</b>	1. The Date Time combination must include the offset time for the time zone. Must be in the restricted W3C format for the XML [dateTime] data type, see ct:EDXLDateTimeType.
<b>Used In</b>	edxIDistribution

<b>Element</b>	<b>distributionStatus</b>
<b>Type</b>	One of a selection of enumerated values
<b>Usage</b>	<b>REQUIRED</b> , MUST be used once and only once
<b>Definition</b>	The action-ability of the message.
<b>Comments</b>	<p>1. The Value must be one of:</p> <ul style="list-style-type: none"> <li>a. Actual - "Real-world" information for action</li> <li>b. Exercise - Simulated information for exercise participants</li> <li>c. System - Messages regarding or supporting network functions</li> <li>d. Test - Discardable messages for technical testing only.</li> <li>e. Unknown – The distributionStatus is not known</li> <li>f. NoAppropriateDefault – The distributionStatus is known but the provided default values are so inappropriate that to choose one would be entirely misleading.</li> </ul>
<b>Used In</b>	edxIDistribution

<b>Element</b>	<b>SenderRole</b>
<b>Type</b>	ct:ValueListType
<b>Usage</b>	<b>OPTIONAL</b> , MAY use multiple
<b>Definition</b>	The functional role of the sender, as it may determine message routing decisions.
<b>Comments</b>	<p>1. The list and associated value(s) is in the form:</p> <pre>&lt;SenderRole&gt; &lt;ct:ValueListURI&gt;valueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/SenderRole&gt;</pre> <p>2. The &lt;ValueListURI&gt; is the Uniform Resource Name of a published list of values and definitions, and &lt;value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>3. Multiple instances of the &lt;ct:Value&gt;, May occur with a single &lt;ct:ValueListURI&gt; within the &lt;senderRole&gt; container.</p> <p>4. Multiple instances of &lt;SenderRole&gt; MAY occur within a single &lt;Descriptor&gt; container</p> <p>5. Numerous organizations provide role definitions; the external role references provided are examples only. The IF committee does not endorse and/or approve any particular role defin-</p>

	<p>ition -external references-</p> <p>Example Role External References:-  <a href="http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf">http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf</a>  <a href="http://www.ccc.ca.gov/emerg/Pages/RolesCapabilities.aspx">http://www.ccc.ca.gov/emerg/Pages/RolesCapabilities.aspx</a>  <a href="https://www.niem.gov/training/Documents/Mod09_NIEM_PI_How_NIEM_uses_XML.pdf">https://www.niem.gov/training/Documents/Mod09_NIEM_PI_How_NIEM_uses_XML.pdf</a></p>
Sub-elements	<p>ValueListURI [1..1]</p> <p>Value [1..*]</p>
Used In	Descriptor

411

412

<b>Element</b>	<b>distributionKind</b>
Type	One of a selection of enumerated values
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The function of the message.
Comments	<p>1. The value must be one of:</p> <ul style="list-style-type: none"> <li>a. Report - New information regarding an incident or activity</li> <li>b. Update - Updated information superseding a previous message</li> <li>c. Cancel - A cancellation or revocation of a previous message</li> <li>d. Request - A request for resources, information or action</li> <li>e. Response - A response to a previous request</li> <li>f. Dispatch - A commitment of resources or assistance</li> <li>g. Ack - Acknowledgment of receipt of an earlier message</li> <li>h. Error - Rejection of an earlier message (for technical reasons)</li> <li>i. SensorConfiguration - These messages are for reporting configuration during power up or after Installation or Maintenance.</li> <li>j. SensorControl - These are messages used to control sensors/sensor concentrator components behavior.</li> <li>k. SensorStatus - These are concise messages which report sensors/sensor concentrator component status or state of health.</li> <li>l. SensorDetection - These are high priority messages which report sensor detections.</li> <li>m. Unknown – The distributionStatus is not known</li> <li>n. NoAppropriateDefault – The distributionStatus is known but the provided default values are so inappropriate that to choose one would be entirely misleading.</li> </ul>



Used In	<a href="#">edxIDistribution</a>
Element	<b>RecipientRole</b>
Type	ct:ValueListType
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The functional role of the recipient, as it may determine message routing decisions.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;RecipientRole&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/RecipientRole&gt;</pre> <p>2. The &lt;ValueListURI&gt; is the Uniform Resource Name of a published list of values and definitions, and the &lt;value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>3. Multiple instances of the &lt;ct:Value&gt;, MAY occur with a single &lt;ct:ValueListURI&gt; within the &lt;recipientRole&gt; container.</p> <p>4. Multiple instances of &lt;RecipientRole&gt; MAY occur within a single &lt;Descriptor&gt; container.</p> <p>5. Numerous organizations provide role definitions; the external role references provided are examples only. The IF committee does not endorse and/or approve any particular role definition external references.</p> <p>Example Role External References:</p> <p><a href="http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf">http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf</a>  <a href="http://www.ccc.ca.gov/emer/Pages/RolesCapabilities.aspx">http://www.ccc.ca.gov/emer/Pages/RolesCapabilities.aspx</a>  <a href="https://www.niem.gov/training/Documents/Mod09_NIEM_PI_How_NIEM_uses_XML.pdf">https://www.niem.gov/training/Documents/Mod09_NIEM_PI_How_NIEM_uses_XML.pdf</a></p>
Sub-elements	ct:ValueListURI [1..1]  ct:Value [1..*]
Used In	Descriptor

413

Element	<b>combinedConfidentiality</b>
Type	One of a selection of enumerated values.
Usage	<b>CONDITIONAL</b> , Must be present when confidentiality is used in a content object
Definition	Confidentiality of the combined distribution message's content.
Comments	1. The <combinedConfidentiality> indicates the confidentiality of the combined <contentObject> sub-elements. Generally the combined confidentiality is the most restrictive of the <confidentiality> elements in the container <contentObject> element, but it can be more restrictive than any of the individual <confidentiality> elements.

	<p>2. The &lt;combinedConfidentiality&gt; element MUST be present if a &lt;confidentiality&gt; element is present in any of the &lt;contentObject&gt; elements.</p> <p>3. The value must be one of:</p> <p style="padding-left: 40px;">a. <u>Unclassified</u></p> <p style="padding-left: 40px;">b. <u>Classified</u></p>
Used In	descriptor

414

<b>Element</b>	<b>Keyword</b>
Type	ct:ValueListType
Usage	<del>OPTIONAL, MAY use multiple</del>
Definition	<del>The topic related to the distribution message, as it may determine message routing decisions.</del>
Comments	<p>1. The list and associated value(s) is in the form:</p> <pre>&lt;Keyword&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/Keyword&gt;</pre> <p>2. The &lt;ct:ValueListURI&gt; is the Uniform Resource Name of a published list of values and definitions, and the &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>3. Multiple instances of the &lt;ct:Value&gt;, MAY occur with a single &lt;ct:ValueListURI&gt; within the &lt;Keyword&gt; container.</p> <p>4. Multiple instances of &lt;Keyword&gt; MAY occur within a single &lt;EDXLDistribution&gt; container.</p> <p>5 Examples of things &lt;Keyword&gt; might be used to describe include event type, event etiology, incident ID and response type.</p>
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..*]
Used In	Descriptor

415

416

<b>Element</b>	<b>language</b>
Type	xsd:language
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	The primary language (but not necessarily exclusive) used in the payloads.
Comments	1. Valid language values are supplied in the ISO standard [RFC3066]. 2. The language MUST be a properly formed -escaped if necessary- XML string.
Used In	descriptor

417

<b>Element</b>	<b>ExplicitAddress</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The identifier of an explicit recipient.
Comments	1. Identifies human parties, systems, services, or devices that are all potential recipients of the distribution message. 2. The explicit address of a recipient in the form: <ExplicitAddress> <ExplicitAddressScheme> explicitAddressScheme </ExplicitAddressScheme> <ExplicitAddressValue> explicitAddressValue </ExplicitAddressValue> </ExplicitAddress> The content of <ExplicitAddressScheme> is the distribution addressing scheme used, and the content of <ExplicitAddressValue> is a string denoting the addressee's value. 3. Multiple instances of the < ExplicitAddressValue > MAY occur with a single < ExplicitAddressScheme > within the <ExplicitAddress > container. 4. Multiple instances of <ExplicitAddress > MAY occur within a single <Descriptor> container.
Sub-elements	ExplicitAddressScheme [1..1] ExplicitAddressValue [1..*]
Used In	Descriptor

<b>Element</b>	<b>senderRole</b>
Type	ct:ValueListType
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The functional role of the sender, as it may determine message routing decisions.
Comments	1. The list and associated value(s) is in the form: <senderRole> <ct:ValueListURI>valueListURI</ct:ValueListURI> <ct:Value>value</ct:Value> </senderRole>

	<p><u>2. The &lt;ct:ValueListURI&gt; is the Uniform Resource Name of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</u></p> <p><u>3. Multiple instances of the &lt;ct:Value&gt;, May occur with a single &lt;ct:ValueListURI&gt; within the &lt;senderRole&gt; container.</u></p> <p><u>4. Multiple instances of &lt;senderRole&gt; MAY occur within a single &lt;descriptor&gt; container</u></p> <p><u>5. Numerous organizations provide role definitions; the external role references provided are examples only. The IF committee does not endorse and/or approve any particular role definition external references.</u></p> <p><u>Example Role External References:</u>  <a href="http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf">http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf</a>  <a href="http://www.ccc.ca.gov/emer/Pages/RolesCapabilities.aspx">http://www.ccc.ca.gov/emer/Pages/RolesCapabilities.aspx</a>  <a href="https://www.niem.gov/training/Documents/Mod09_NIEM_PI_How_NIEM_uses_XML.pdf">https://www.niem.gov/training/Documents/Mod09_NIEM_PI_How_NIEM_uses_XML.pdf</a></p>
Sub-elements	<p>ValueListURI [1..1]</p> <p>Value [1..*]</p>
Used In	descriptor
Element	<b>Urgency</b>
Type	A choice between a user-defined value or a default value
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	The urgency of the content of the message.
Comments	<p>1. The list and associated value are in the form:</p> <pre>&lt;DistributionType&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/DistributionType&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Only a single value may be specified</p> <p>3. If the default value list is used, then the ValueListURI must be: "urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:Urgency" and the Value must be one of:</p> <ul style="list-style-type: none"> <li>a. "Immediate" – Responsive action SHOULD be taken immediately</li> <li>b. "Expected" – Responsive action SHOULD be taken soon (within next hour)</li> <li>c. "Future" – Responsive action SHOULD be taken in the near future</li> <li>d. "Past" – Responsive action is no longer required</li> </ul>

	<p><del>e. "Unknown" - Urgency not known</del></p> <p>4. The value MUST be a properly formed <del>escaped if necessary</del> XML string.</p>
Sub-elements	Either UrgencyDefault [0..1] or UrgencyValueList [0..1]
Used In	Descriptor

418

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<b>Element</b>	<b>recipientRole</b>
Type	ct:ValueListType
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The functional role of the recipient, as it may determine message routing decisions.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;recipientRole&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/recipientRole&gt;</pre> <p>2. The &lt;ct:ValueListURI&gt; is the Uniform Resource Name of a published list of values and definitions, and the &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>3. Multiple instances of the &lt;ct:Value&gt;, MAY occur with a single &lt;ct:ValueListURI&gt; within the &lt;recipientRole&gt; container.</p> <p>4. Multiple instances of &lt;recipientRole&gt; MAY occur within a single &lt;descriptor&gt; container.</p> <p>5. Numerous organizations provide role definitions; the external role references provided are examples only. The IF committee does not endorse and/or approve any particular role definition -external references.</p> <p>Example Role External References:</p> <p><a href="http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf">http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf</a>  <a href="http://www.ccc.ca.gov/emer/Pages/RolesCapabilities.aspx">http://www.ccc.ca.gov/emer/Pages/RolesCapabilities.aspx</a>  <a href="https://www.niem.gov/training/Documents/Mod09_NIEM_PI_How_NIEM_uses_XML.pdf">https://www.niem.gov/training/Documents/Mod09_NIEM_PI_How_NIEM_uses_XML.pdf</a></p>
Sub-elements	ct:ValueListURI [1..1]  ct:Value [1..*]
Used In	Descriptor

420

<b>Element</b>	<b>UrgencyDefault</b>
Type	ct:UrgencyDefaultType

Usage	<del>OPTIONAL, MAY be used once and only once</del>
Definition	Specifies the default urgency list and value, for example “Immediate” or “Expected”.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;UrgencyDefault&gt; &lt;ct:ValueListURI&gt;urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:Urgency&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/UrgencyDefault&gt;</pre> <p>2. The Value must be Immediate, Expected, Future, Past, or Unknown</p>
Sub-elements	ct:ValueListURI ct:Value
Used In	<del>Urgency</del>

421

<b>Element</b>	<b>keyword</b>
Type	ct:ValueListType
Usage	<u>OPTIONAL, MAY use multiple</u>
Definition	<u>The topic related to the distribution message, as it may determine message routing decisions.</u>
Comments	<p>1. <u>The list and associated value(s) is in the form:</u></p> <pre>&lt;keyword&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/keyword&gt;</pre> <p>2. <u>The &lt;ct:ValueListURI&gt; is the Uniform Resource Name of a published list of values and definitions, and the &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</u></p> <p>3. <u>Multiple instances of the &lt;ct:Value&gt;, MAY occur with a single &lt;ct:ValueListURI&gt; within the &lt;keyword&gt; container.</u></p> <p>4. <u>Multiple instances of &lt;keyword&gt; MAY occur within a single &lt;edxIDistribution&gt; container.</u></p> <p>5 <u>Examples of things &lt;keyword&gt; might be used to describe include event type, event etiology, incident ID and response type.</u></p>
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..*]
Used In	<u>descriptor</u>

422

<b>Element</b>	<b>UrgencyValueList</b>
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Type	ct:ValueKeyType
Usage	<del>OPTIONAL, MAY be used once and only once</del>
Definition	Specifies the urgency of the message".
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;UrgencyValueList&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt;&lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/UrgencyValueList&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. One and only one instance of &lt;ct:Value&gt; MUST occur.</p>
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..1]
Used In	Urgency

423

424

<b>Element</b>	<b>explicitAddress</b>
Type	XML Structure
Usage	<del>OPTIONAL, MAY use multiple</del>
Definition	<del>The identifier of an explicit recipient.</del>
Comments	<p><del>1. Identifies human parties, systems, services, or devices that are all potential recipients of the distribution message.</del></p> <p>1. <del>2. The explicit address of a recipient in the form:</del>  <pre>&lt;explicitAddress&gt; &lt;explicitAddressScheme&gt; explicitAddressScheme &lt;/explicitAddressScheme&gt; &lt;explicitAddressValue&gt; explicitAddressValue &lt;/explicitAddressValue&gt; &lt;/explicitAddress &gt;</pre> <p><del>The content of &lt;explicitAddressScheme&gt; is the distribution addressing scheme used, and the content of &lt;explicitAddressValue&gt; is a string denoting the addressees value.</del></p> <p>2. <del>3. Multiple instances of the &lt;explicitAddressValue &gt; MAY occur with a single &lt; explicitAddressScheme&gt; within the &lt;explicitAddress &gt; container.</del></p> <p><del>4. Multiple instances of &lt;explicitAddress &gt; MAY occur within a single &lt;descriptor&gt; container.</del></p> </p>
Sub-elements	explicitAddressScheme[1..1] explicitAddressValue[1..*]
Used In	descriptor

<b>Element</b>	<b>Severity</b>
Type	A choice between a user-defined value or a default value
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	The severity of the content of the message.
Comments	<p>1. The list and associated value are in the form:</p> <pre>&lt;DistributionType&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/DistributionType&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Only a single value may be specified</p> <p>3. If the default value list is used, then the ValueListURI must be: "urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:Severity" and the Value must be one of:</p> <ul style="list-style-type: none"> <li>a. "Extreme" - Extraordinary threat to life or property</li> <li>b. "Severe" - Significant threat to life or property</li> <li>c. "Moderate" - Possible threat to life or property</li> <li>d. "Minor" - Minimal to no known threat to life or property</li> <li>e. "Unknown" - Severity unknown</li> </ul> <p>4. The value MUST be a properly formed -escaped if necessary- XML string.</p>
Sub-elements	Either SeverityDefault or SeverityValueList
Used In	Descriptor

425

<b>Element</b>	<b>urgency</b>
Type	One of a selection of enumerated values.
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	The urgency of the content of the message.
Comments	<p>1. The value must be one of:</p> <ul style="list-style-type: none"> <li>a. "Immediate" - Responsive action SHOULD be taken immediately</li> <li>b. "Expected" - Responsive action SHOULD be taken soon (within next hour)</li> </ul>



	<p>c. "Future" - Responsive action SHOULD be taken in the near future</p> <p>d. "Past" - Responsive action is no longer required</p> <p>e. "Unknown" - Urgency not known</p> <p>f. "NoAppropriateDefault" – The urgency is known but the provided default values are so inappropriate that to choose one would be entirely misleading.</p>
Used In	descriptor

426

<b>Element</b>	<b>SeverityDefault</b>
Type	ct:SeverityDefaultType
Usage	<del>OPTIONAL, MAY be used once and only once</del>
Definition	Specifies the default severity list and value, for example "Extreme" or "Severe".
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;SeverityDefault&gt; &lt;ct:ValueListURI&gt;urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:Severity&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/SeverityDefault&gt;</pre> <p>2. The Value must be Extreme, Severe, Moderate, Minor, Unknown</p>
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..1]
Used In	Severity

427

428

<b>Element</b>	<b>SeverityValueList</b>
Type	ct:ValueKeyType
Usage	<del>OPTIONAL, MAY be used once and only once</del>
Definition	Specifies the severity of the message".
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;SeverityValueList&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/SeverityValueList&gt;</pre> <p>The content of &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and the content of &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. One and only one instance of &lt;ct:Value&gt; MUST occur.</p>

Sub-elements	ct:ValueListURI [1..1] ct:Value [1..1]
Used In	Severity

<b>Element</b>	<b>severity</b>
Type	One of a selection of enumerated values.
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	The severity of the content of the message.
Comments	<p>1. The value must be one of:</p> <ul style="list-style-type: none"> <li>a. "Extreme" - Extraordinary threat to life or property</li> <li>b. "Severe" - Significant threat to life or property</li> <li>c. "Moderate" - Possible threat to life or property</li> <li>d. "Minor" – Minimal to no known threat to life or property</li> <li>e. "Unknown" - Severity unknown</li> <li>f. "NoAppropriateDefault" – The severity is known but the provided default values are so inappropriate that to choose one would be entirely misleading.</li> </ul>
Used In	descriptor

<b>Element</b>	<b>Certainty</b>
Type	A choice between a user-defined value or a default value
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	The certainty of the content of the message.
Comments	<p>1. The list and associated value are in the form:</p> <pre>&lt;DistributionType&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/DistributionType&gt;</pre> <p>The content of &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and the content of &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Only a single value may be specified</p> <p>3. If the default value list is used, then the ValueListURI must be: "urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:Certainty" and the Value must be one of:</p> <ul style="list-style-type: none"> <li>a. "Observed" – Determined to have occurred or to be ongoing</li> <li>b. "Likely" – Likely (p &gt; ~50%)</li> </ul>

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	<p><del>c. "Possible" - Possible but not likely (p &lt;= ~50%)</del></p> <p><del>d. "Unlikely" - Not expected to occur (p ~ 0)</del></p> <p><del>e. "Unknown" - Certainty unknown</del></p> <p>4. The value MUST be a properly formed <del>escaped if necessary</del> XML string.</p>
Sub-elements	Either <del>CertaintyDefault [0..1]</del> or <del>CertaintyValueList [0..1]</del>
Used In	Descriptor

<b>Element</b>	<b>certainty</b>
Type	One of a selection of enumerated values.
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	The certainty of the content of the message.
Comments	<p>1. The value must be one of:</p> <p><del>a. "Observed" - Determined to have occurred or to be ongoing</del></p> <p><del>b. "Likely" - Likely (p &gt; ~50%)</del></p> <p><del>c. "Possible" - Possible but not likely (p &lt;= ~50%)</del></p> <p><del>d. "Unlikely" - Not expected to occur (p ~ 0)</del></p> <p><del>e. "Unknown" - Certainty unknown</del></p> <p><del>f. "NoAppropriateDefault" - The severity is known but the provided default values are so inappropriate that to choose one would be entirely misleading.</del></p>
Used In	descriptor

<b>Element</b>	<b>CertaintyDefault</b>
Type	ct:SeverityDefaultType
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	Specifies the default certainty list and value, for example "Observed" or "Likely".
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;CertaintyDefault&gt; &lt;ct:ValueListURI&gt;urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:Certainty&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/CertaintyDefault&gt;</pre> <p>2. The value must be <del>Observed, Likely, Possible, Unlikely, Unknown</del></p>
Sub-ele-	ct:ValueListURI [1..1]

ments	ct:Value [1..1]
Used In	Certainty

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<b>Element</b>	<b>incidentID</b>
Type	ct:EDXLStringType
Usage	<b>OPTIONAL</b> , MAY use multiple times
Definition	The human-readable text uniquely identifying the incident/event/situation associated with the Content.
Comments	1. MUST be a properly formed -escaped if necessary- XML string.
Used In	descriptor
<b>Element</b>	<b>CertaintyValueList</b>
Type	ct:ValueKeyType
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	Specifies the certainty of the message.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;CertaintyValueList&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/CertaintyValueList&gt;</pre> <p>The content of &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and the content of &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. One and only one instance of &lt;ct:Value&gt; MUST occur.</p>
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..1]
Used In	Certainty

434

<b>Element</b>	<b>IncidentID</b>
Type	ct:EDXLStringType
Usage	<b>OPTIONAL</b> , MAY use multiple times
Definition	The human-readable text uniquely identifying the incident/event/situation associated with the Content.
Comments	1. MUST be a properly formed -escaped if necessary- XML string.
Used In	Descriptor

435

<b>Element</b>	<b>IncidentDescription</b>
Type	ct:EDXLStringType
Usage	<b>OPTIONAL</b> , MAY use once and only once–
Definition	The human-readable text describing the incident/event/situation associated with the ContentObject.–
Comments	1. MUST be a properly formed -escaped if necessary- XML string.–
Used In	ContentDescriptor–

436

<b>Element</b>	<b>incidentDescription</b>
Type	ct:EDXLStringType
Usage	<b>OPTIONAL</b> , MAY use once and only once_
Definition	The human-readable text describing the incident/event/situation associated with the ContentObject._
Comments	1. MUST be a properly formed -escaped if necessary- XML string._
Used In	descriptor_

### 437 **3.2.2 TargetAreas Element and Sub-elements**

438 The <TargetAreas> is a container element for the geospatial or political areas targeting or describing the  
 439 message content. It indicates the originator's intent based on location targeting as to the dissemination of  
 440 that particular message or set of messages. The <TargetArea> utilizes the EDXL GML SimpleFeatures  
 441 Profile, which should be consulted for detailed description of <TargetArea> sub-elements.

442

### 443 **3.2.3 targetAreas Element and Sub-elements**

444 The <targetAreas> is a container element for the geospatial or political areas targeting or describing the  
 445 message content. It indicates the originator's intent based on location targeting as to the dissemination of  
 446 that particular message or set of messages. The <targetArea> utilizes the EDXL GML SimpleFeatures  
 447 Profile, which should be consulted for detailed description of <targetArea> sub-elements.

<b>Element</b>	<b>TargetAreas</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY use multiple–
Definition	A container for TargetArea information.
Comments	1. The <TargetAreas> block must contain one <AreaKind> block, one <AreaGrouping> block, and one or more <TargetArea> elements.–
Sub-elements	-AreaKind [1..1] -AreaGrouping [1..1] -TargetArea [1..*] -

448

Used In	Descriptor
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<b>Element</b>	<b>targetAreas</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	A container for TargetArea information.
Comments	1. The <targetAreas> block must contain one <areaKind> block, one <areaGrouping> block, and one or more <targetArea> elements.
Sub-elements	<u>areaKind [1..1]</u> <u>areaGrouping [1..1]</u> <u>targetArea [1..*]</u> -
Used In	descriptor
<b>Element</b>	<b>AreaGrouping</b>
Type	XML Structure
Usage	<b>REQUIRED</b> , MAY use multiple
Definition	The container element for location information.
Comments	1. The value must be one of: "Intersection", "Union", "ExclusiveOr", "Complement", "Other-GroupingType".
Used In	TargetAreas

449

<b>Element</b>	<b>areaGrouping</b>
Type	One of a selection of enumerated values.
Usage	<b>REQUIRED</b> , MUST be used once and only once.
Definition	The container element for location information.
Comments	1. The value must be one of: "Intersection", "Union", "ExclusiveOr", "Complement", "Other-GroupingType", "Unknown", "NoAppropriateDefault".
Used In	targetAreas
<b>Element</b>	<b>TargetArea</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The container element for location information.
Comments	1. If multiple Sub-elements appear in a single <TargetArea> element then it should be in the document order with most accurate representation first.

	2. Multiple <TargetArea> blocks may appear in a single <TargetAreas>element.
Sub-elements	edxl-gsf:EDXLGeoLocation [0..*] ct:EDXLGeoPoliticalLocation [0..*] -
Used In	TargetAreas

<b>Element</b>	<b>targetArea</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The container element for location information.
Comments	1. If multiple Sub-elements appear in a single <targetArea> element then it should be in the document order with most accurate representation first.  2. Multiple <targetArea> blocks may appear in a single <targetAreas>element.
Sub-elements	edxl-gsf:EDXLGeoLocation [0..*] ct:EDXLGeoPoliticalLocation [0..*] -
Used In	targetAreas

<b>Element</b>	<b>AreaKind</b>
Type	A choice between a user-defined value or a default value
Usage	<b>REQUIRED</b> , MUST use once and only once.
Definition	Specifies the kind of area, for example “target” or “source”.
Comments	1. The list and associated value(s) are in the form:  <pre>&lt;AreaKind&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/AreaKind&gt;</pre> <p>The content of &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and the content of &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. One and only one instance of &lt;ct:Value&gt; MUST occur.</p> <p>3. If the default is used, the ValueListURI must be “urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:AreaKind” and the Value must be “DistributionTargetArea” or “SourceTargetArea”</p>
Sub-elements	Either AreaKindDefault [0..1] or AreaKindValueList [0..1]
Used In	TargetAreas

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<b>Element</b>	<b>AreaKindDefault</b>
Type	ct:AreaKindDefaultType
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	Specifies the default kind of area, for example “target” or “source”.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;AreaKindDefault&gt; &lt;ct:ValueListURI&gt;urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:AreaKind&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/AreaKindDefault&gt;</pre> <p>2. The Value must be “DistributionTargetArea” or “SourceTargetArea”</p>
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..1]
Used In	AreaKind

453 |

<b>Element</b>	<b>areaKind</b>
Type	One of a selection of enumerated values.
Usage	<b>REQUIRED</b> , MUST use once and only once.
Definition	Specifies the kind of area, for example “SourceTargetArea” or “DistributionTargetArea”.
Comments	1. The value must be one of “SourceTargetArea”, “DistributionTargetArea”, “OtherTargetArea”, “Unknown”, or “NoAppropriateDefault”
Used In	targetAreas

454 | -

<b>Element</b>	<b>AreaKindValueList</b>
Type	ct:ValueKeyType
Usage	<b>OPTIONAL</b> , MAY be used once and only once
Definition	Specifies the default kind of area, for example “target” or “source”.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;AreaKindValueList&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/AreaKindValueList&gt;</pre> <p>The content of &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of</p>



	<p>values and definitions, and the content of &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. One and only one instance of &lt;ct:Value&gt; MUST occur.</p>
Sub-elements	<p>ct:ValueListURI [1..1]</p> <p>ct:Value [1..1]</p>
Used In	AreaKind

455

### 456 3.2.4 cContentObject Element and Sub-elements

457 The <contentObject> element is the container element for specific messages. The <contentObject>  
458 element MUST either contain a <contentXML> content container or a <otherContent> content container.  
459 Additional elements (metadata) used for specific distribution of the <contentObject> payload or hints for  
460 processing the payload are also present in the <cContentObject> element is the container element for  
461 specific messages. The <ContentObject> element MUST either contain a <ContentXML> content  
462 container or a <OtherContent> content container. Additional elements (metadata) used for specific  
463 distribution of the <ContentObject> payload or hints for processing the payload are also present in the  
464 <ContentObject> container element.

<b>Element</b>	<b>contentObject</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The container element for message data and content.
Comments	<p>1. The &lt;contentObject&gt; is the container element for specific messages.</p> <p>2. The &lt;contentObject&gt; may have an optional attribute that defines a namespace prefix which resolves ambiguous element names.</p> <p>3. The &lt;contentObject&gt; contains an optional &lt;contentDescriptor&gt; to describe the content.</p> <p>4. The &lt;contentObject&gt; element MUST contain exactly one of the two content formats:</p> <p>&lt;contentXML&gt;, for valid namespaced XML content</p> <p>or</p> <p>&lt;otherContent&gt;, containing either a &lt;uri&gt; element, for reference to the content's location, or a &lt;contentData&gt; element, for data encapsulated in the message.</p> <p>5. This element can be the source or destination for a link. See Section 1.3.5.</p>
Sub-elements	<p>contentDescriptor [0..1]</p> <p>Either contentXML [1..1] or otherContent [1..1])</p> <p>Other [0..*]</p>

Used In	edxIDistribution or Stand-alone
Element	<b>ContentObject</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The container element for message data and content.
Comments	<p>1. The &lt;ContentObject&gt; is the container element for specific messages.</p> <p>2. The &lt;ContentObject&gt; may have an optional attribute that defines a namespace prefix which resolves ambiguous element names.</p> <p>3. The &lt;ContentObject&gt; contains an optional &lt;ContentDescriptor&gt; to describe the content.</p> <p>4. The &lt;ContentObject&gt; element MUST contain exactly one of the two content formats:</p> <p style="padding-left: 40px;">&lt;ContentXML&gt;, for valid namespaced XML content</p> <p style="text-align: center;">or</p> <p style="padding-left: 40px;">&lt;OtherContent&gt;, containing either a &lt;Uri&gt; element, for reference to the content's location, or a &lt;ContentData&gt; element, for data encapsulated in the message.</p> <p>5. This element can be the source or destination for a link. See Section 1.3.5.</p>
Sub-elements	<p>ContentDescriptor [0..1]</p> <p>Either ContentXML [1..1] or OtherContent [1..1]</p> <p>Other [0..*]</p>
Used In	EDXLDistribution or Stand-alone

465

Element	<b>contentDescriptor</b>
Type	XML Structure
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	The description of the message content object
Comments	1. This element can be the source or destination for a link. See Section 1.3.5.
Sub-elements	<p>contentDescription [0..1]</p> <p>contentKeyword [0..*]</p> <p>originatorRole [0..*]</p> <p>consumerRole [0..*]</p> <p>contentID [0..*]</p> <p>confidentiality [0..1]</p>

	<a href="#">contentLanguage [0..1]</a> <a href="#">ext:extension [0..*]</a>
<b>Used In</b>	<a href="#">edxIDistribution or Stand-alone</a>
<b>Element</b>	<b>ContentDescriptor</b>
<b>Type</b>	XML Structure
<b>Usage</b>	<b>OPTIONAL</b> , MAY use once and only once
<b>Definition</b>	The description of the message content object
<b>Comments</b>	1. This element can be the source or destination for a link. See Section 1.3.5.
<b>Sub-elements</b>	<a href="#">ContentDescription [0..1]</a> <a href="#">ContentKeyword [0..*]</a> <a href="#">OriginatorRole [0..*]</a> <a href="#">ConsumerRole [0..*]</a> <a href="#">ContentID [0..*]</a> <a href="#">Confidentiality [0..1]</a> <a href="#">ContentLanguage [0..1]</a>
<b>Used In</b>	<a href="#">EDXLDistribution or Stand-alone</a>

466  
467

<b>Element</b>	<b><a href="#">contentDescription</a></b>
<b>Type</b>	<a href="#">ct:EDXLStringType</a>
<b>Usage</b>	<b>OPTIONAL</b> , MAY use once and only once
<b>Definition</b>	The human-readable text describing the content object.
<b>Comments</b>	MUST be a properly formed -escaped if necessary- XML string.
<b>Used In</b>	<a href="#">contentDescriptor</a>
<b>Element</b>	<b>ContentDescription</b>
<b>Type</b>	ct:EDXLStringType
<b>Usage</b>	<b>OPTIONAL</b> , MAY use once and only once
<b>Definition</b>	The human-readable text describing the content object.
<b>Comments</b>	MUST be a properly formed -escaped if necessary- XML string.
<b>Used In</b>	ContentDescriptor

468

<b>Element</b>	<b><a href="#">contentKeyword</a></b>
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Type	ct:ValueListType
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The topic related to the message data and content, as it may determine message distribution and presentation decisions.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;contentKeyword&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/contentKeyword&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Multiple instances of the &lt;ct:Value&gt;, MAY occur with a single &lt;ct:ValueListURI&gt; within the &lt;contentKeyword&gt; container.</p> <p>3. Multiple instances of &lt;contentKeyword&gt; MAY occur within a single &lt;contentObject&gt; container.</p>
Sub-elements	ValueListURI [1..1] Value [1..*]
Used In	ContentDescriptor
Element	<b>ContentKeyword</b>
Type	ct:ValueListType
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The topic related to the message data and content, as it may determine message distribution and presentation decisions.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;ContentKeyword&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/ContentKeyword&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Name of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Multiple instances of the &lt;ct:Value&gt;, MAY occur with a single &lt;ct:ValueListURI&gt; within the &lt;ContentKeyword&gt; container.</p> <p>3. Multiple instances of &lt;ContentKeyword&gt; MAY occur within a single &lt;ContentObject&gt; container.</p>
Sub-ele-	ValueListURI [1..1]

ments	Value [1..*]
Used In	ContentDescriptor

<b>Element</b>	<b>originatorRole</b>
Type	ct:ValueListType
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The functional role of the message originator, as it may determine message distribution and presentation decisions.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;originatorRole&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/originatorRole&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Identifier of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Multiple instances of the &lt;Value&gt;, MAY occur with a single &lt;ValueListURI&gt; within the &lt;OriginatorRole&gt; container.</p> <p>3. Multiple instances of &lt;originatorRole&gt; MAY occur within a single &lt;contentObject&gt; container.</p>
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..*]
Used In	contentDescriptor
<b>Element</b>	<b>OriginatorRole</b>
Type	ct:ValueListType
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The functional role of the message originator, as it may determine message distribution and presentation decisions.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;OriginatorRole&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/OriginatorRole&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Name of a published list of values and</p>

	<p>definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Multiple instances of the &lt;Value&gt;, MAY occur with a single &lt;ValueListURI&gt; within the &lt;OriginatorRole&gt; container.</p> <p>3. Multiple instances of &lt;OriginatorRole&gt; MAY occur within a single &lt;ContentObject&gt; container.</p>
Sub-elements	<p>ct:ValueListURI [1..1]</p> <p>ct:Value [1..*]</p>
Used In	ContentDescriptor

<b>Element</b>	<b>consumerRole</b>
Type	ct:ValueListType
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The functional role of the message consumer, as it may determine message distribution and presentation decisions.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;consumerRole&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/consumerRole&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Name of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Multiple instances of the &lt;ct:Value&gt;, MAY occur with a single &lt;ct:ValueListURI&gt; within the &lt;consumerRole&gt; container.</p> <p>3. Multiple instances of &lt;consumerRole&gt; MAY occur within a single &lt;contentObject&gt; container.</p>
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..*]
Used In	contentDescriptor
<b>Element</b>	<b>ConsumerRole</b>
Type	ct:ValueListType
Usage	<b>OPTIONAL</b> , MAY use multiple
Definition	The functional role of the message consumer, as it may determine message distribution and presentation decisions.
Comments	<p>1. The list and associated value(s) are in the form:</p> <pre>&lt;ConsumerRole&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/ConsumerRole&gt;</pre> <p>The &lt;ct:ValueListURI&gt; is the Uniform Resource Name of a published list of values and definitions, and &lt;ct:Value&gt; is a string (which may represent a number) denoting the value itself.</p> <p>2. Multiple instances of the &lt;ct:Value&gt;, MAY occur with a single &lt;ct:ValueListURI&gt; within the &lt;consumerRole&gt; container.</p>

	3. Multiple instances of <ConsumerRole> MAY occur within a single<ContentObject> container.
Sub-elements	ct:ValueListURI [1..1] ct:Value [1..*]
Used In	ContentDescriptor

471

<b>Element</b>	<b>contentID</b>
Type	ct:EDXLStringType
Usage	<b>OPTIONAL</b> , MAY be used multiple times.
Definition	An identifier for a contentObject.
Comments	1. Multiple instances of contentID MAY occur within a contentDescriptor. 2.The identifier MUST be a properly formed -escaped if necessary- XML string. 3.The string length of the identifier MUST be less than 1024.
Used In	contentDescriptor

<b>Element</b>	<b>ContentID</b>
Type	ct:EDXLStringType
Usage	<b>OPTIONAL</b> , MAY be used multiple times.
Definition	An identifier for a ContentObject.
Comments	1. Multiple instances of ContentID MAY occur within a ContentDescriptor. 2.The identifier MUST be a properly formed -escaped if necessary- XML string. 3.The string length of the identifier MUST be less than 1024.
Used In	ContentDescriptor

472

<b>Element</b>	<b>confidentiality</b>
Type	One of a selection of enumerated values.
Usage	<b>OPTIONAL</b> , MAY use once and only once.
Definition	Special requirements regarding confidentiality of the content of this <contentObject>.
Comments	1. The value must be one of:  a. <u>Unclassified</u>  b. <u>Classified</u>



	<u>2. The extension mechanism defined in Section 1.3.8 can be used to provide a more specific classification value from an externally-managed, community-appropriate classification list.</u>
Used In	<u>contentDescriptor</u>
Element	<b>Confidentiality</b>
Type	A choice between a user-defined value or a default value
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	Special requirements regarding confidentiality of the content of this <ContentObject>.
Comments	<p>1. The list and associated value are in the form:</p> <pre>&lt;Confidentiality&gt; &lt;ct:ValueListURI&gt;ValueListURI&lt;/ct:ValueListURI&gt; &lt;ct:Value&gt;value&lt;/ct:Value&gt; &lt;/Confidentiality&gt;</pre> <p>2. MUST be a properly formed -escaped if necessary- XML string.</p> <p>3. Only one ct:Value may be specified.</p> <p>4. If the default value list is used, the ValueListURI must be: "urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:ConfidentialityType" and the Value must be one of:</p> <ul style="list-style-type: none"> <li>a. Unclassified</li> <li>b. Classified</li> </ul>
Sub-elements	Either ConfidentialityDefault [1..1] or ConfidentialityValueList [1..1]
Used In	ContentDescriptor

473

Element	<b>contentLanguage</b>
Type	xsd:language
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	Specifies the language of this particular content object.
Comments	<p>1. Valid language values are supplied in the ISO standard [RFC3066].</p> <p>2. The language MUST be a properly formed -escaped if necessary- XML string.</p>
Used In	<u>contentDescriptor</u>
Element	<b>ContentLanguage</b>
Type	xsd:language
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	Specifies the language of this particular content object.
Comments	1. Valid language values are supplied in the ISO standard [RFC3066].

474

	2. The language MUST be a properly formed -escaped if necessary- XML string.
Used In	ContentDescriptor
<b>Element</b>	<i>other</i>
Type	XML content from any namespace other than the DE 2.0 namespace
Usage	<b>OPTIONAL</b> , MAY be use to add an unlimited number of XML elements for enveloped signing process.
Definition	Special requirements allowing for signature of the content of a <ContentObject>.
Comments	<p>1. There is no mandatory validation of the elements if the namespace reference can not be located.</p> <p>2. MUST be a properly formed XML string – escaped, if necessary.</p> <p>3. Element names cannot duplicate other element names in the contentObject. Such duplication would prevent validation due to the ambiguity introduced.</p> <p>4. This element may be used for signatures. Use the “extension” element for other types of supplemental information.</p>
Used In	contentObject

475

### 3.2.5 otherContent Element and Sub-elements

<b>Element</b>	<b>otherContent</b>
Type	XML Structure
Usage	<b>CONDITIONAL</b> , MUST use once if ContentXML is not used
Definition	Container for content provided in a non-XML MIME type.
Comments	<p>1. The &lt;otherContent&gt; container MUST contain either &lt;contentData&gt; or &lt;uri&gt; or both.</p> <p>2. If the &lt;uri&gt; element is used in conjunction with the &lt;contentData&gt; element, it must reference a data location that contains the same data as is contained in the &lt;contentData&gt; element.</p>
Sub-elements	<p>contentType [1..1]</p> <p>size [0..1]</p> <p>digest [0..1]</p> <p>uri [0..1]</p> <p>contentData [0..1]</p>
Used In	contentObject
<b>Element</b>	<i>Other</i>
Type	XML content from any namespace other than the DE 2.0 namespace
Usage	<b>OPTIONAL</b> , MAY be use to add an unlimited number of XML elements for enveloped

	signing process.—
Definition	Special requirements allowing for signature of the content of a <ContentObject>.—
Comments	<p>1. There is no mandatory validation of the elements if the namespace reference can not be located.</p> <p>2. MUST be a properly formed XML string — escaped, if necessary.</p> <p>3. Element names cannot duplicate other element names in the ContentObject. Such duplication would prevent validation due to the ambiguity introduced.—</p> <p>4. This element may be used for signatures. If this element is used for experimental extensions, such extensions may not be supported by all users or in future versions of EDXL-DE.</p>
Used In	ContentObject

### 476 3.2.6 OtherContent Element and Sub-elements

<b>Element</b>	<b>OtherContent</b>
Type	XML Structure
Usage	<del>CONDITIONAL</del> , MUST use once if ContentXML is not used—
Definition	Container for content provided in a non-XML MIME type.—
Comments	<p>1. The &lt;OtherContent&gt; container MUST contain either &lt;ContentData&gt; or &lt;Uri&gt; or both.</p> <p>2. If the &lt;Uri&gt; element is used in conjunction with the &lt;ContentData&gt; element, it must reference a data location that contains the same data as is contained in the &lt;ContentData&gt; element.—</p>
Sub-elements	<p>MimeType [1..1]</p> <p>Size [0..1]</p> <p>Digest [0..1]</p> <p>Uri [0..1]—</p> <p>ContentData [0..1]</p>
Used In	ContentObject

477

<b>Element</b>	<b>contentType</b>
Type	ct:EDXLStringType
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The format of the payload.
Comments	<p>1. MIME content type and sub-type as described in [RFC 2046].</p> <p>2. The string length of the identifier MUST be less than 1024.</p>

	3. MUST be a properly formed -escaped if necessary- XML string.
Used In	<u>otherContent</u>
<b>Element</b>	<b>MimeType</b>
Type	et:EDXLStringType
Usage	<b>REQUIRED</b> , MUST be used once and only once
Definition	The format of the payload.—
Comments	1. MIME content type and sub-type as described in [RFC 2046]. 2. The string length of the identifier MUST be less than 1024. 3. MUST be a properly formed -escaped if necessary- XML string.
Used In	<del>OtherContent</del>

478

<b>Element</b>	<b>size</b>
Type	xsd:integer
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	The file size of the payload.
Comments	1. Value must be in bytes and represent the raw file size (not encoded or encrypted).
Used In	<u>otherContent</u>
<b>Element</b>	<b>Size</b>
Type	xsd:integer
Usage	<b>OPTIONAL</b> , MAY use once and only once—
Definition	The file size of the payload.—
Comments	1. Value must be in bytes and represent the raw file size (not encoded or encrypted)—
Used In	<del>OtherContent</del>

479

<b>Element</b>	<b>digest</b>
Type	xsd:base64Binary
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	The digest value for the payload.
Comments	1. Used to ensure the integrity of the payload. 2. Calculated using the Secure Hash Algorithm (SHA-1) 3. MUST be a hexadecimal representation of a SHA-1 Hash followed by a BASE 64-encoding to be carried in a non-CDATA element.

Used In	<u>otherContent</u>
<b>Element</b>	<b>Digest</b>
Type	xsd:base64Binary
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	The digest value for the payload.—
Comments	<p>1. Used to ensure the integrity of the payload.</p> <p>2. Calculated using the Secure Hash Algorithm (SHA-1)</p> <p>3. MUST be a hexadecimal representation of a SHA-1 Hash followed by a BASE-64-encoding to be carried in a non-CDATA element.</p>
Used In	<u>OtherContent</u>

480

<b>Element</b>	<b>uri</b>
Type	xsd:anyURI
Usage	<b>OPTIONAL</b> , MAY use once and only once; but <b>REQUIRED</b> if contentData not used
Definition	<u>A Uniform Resource Identifier that can be used to retrieve the identified resource.</u>
Comments	<p>1. May be a full absolute URI, typically a Uniform Resource Locator, that can be used to retrieve the resource over the Internet.</p> <p>2. May be a relative URI naming a file. This may be just a pointer to a file or specifically to the file represented in the &lt;ContentData&gt;.</p>
Used In	<u>otherContent</u>
<b>Element</b>	<b>Uri</b>
Type	xsd:anyURI
Usage	<b>OPTIONAL</b> , MAY use once and only once—
Definition	<u>A Uniform Resource Identifier that can be used to retrieve the identified resource.—</u>
Comments	<p>1. May be a full absolute URI, typically a Uniform Resource Locator, that can be used to retrieve the resource over the Internet.</p> <p>2. May be a relative URI naming a file. This may be just a pointer to a file or specifically to the file represented in the &lt;ContentData&gt;.</p>
Used In	<u>OtherContent</u>

481

<b>Element</b>	<b>contentData</b>
Type	xsd:base64Binary
Usage	<b>OPTIONAL</b> , MAY use once and only once; but <b>REQUIRED</b> if uri not used
Definition	<u>The base-64 encoded data content.</u>

<u>Comments</u>	1. MAY be used either with or instead of the <Uri> element in contexts where retrieval of a resource via a URI is not feasible.  2. MUST be a properly formed -escaped if necessary- XML string.
<u>Used In</u>	<u>otherContent</u>

### 482 3.2.7 contentXML Element and Sub-elements

<b>Element</b>	<b>contentXML</b>
<u>Type</u>	XML Structure
<u>Usage</u>	<b>CONDITIONAL</b> , MUST use once and only once if otherContent is not used
<u>Definition</u>	Container for valid-namespaced XML data.
<u>Comments</u>	An optional namespace attribute may be included.
<u>Sub-elements</u>	keyXMLContent [0..1] embeddedXMLContent [1..1]
<u>Used In</u>	contentObject
<b>Element</b>	<b>ContentData</b>
<u>Type</u>	xsd:base64Binary
<u>Usage</u>	<b>OPTIONAL</b> , MAY use once and only once
<u>Definition</u>	The base-64 encoded data content.
<u>Comments</u>	1. MAY be used either with or instead of the <Uri> element in contexts where retrieval of a resource via a URI is not feasible.  2. MUST be a properly formed -escaped if necessary- XML string.
<u>Used In</u>	OtherContent

### 483 3.2.8 ContentXML Element and Sub-elements

<b>Element</b>	<b>ContentXML</b>
<u>Type</u>	XML Structure
<u>Usage</u>	<b>CONDITIONAL</b> , MUST use once and only once if OtherContent is not used
<u>Definition</u>	Container for valid-namespaced XML data.
<u>Comments</u>	An optional namespace attribute may be included.

Sub-elements	KeyXMLContent [0..1] EmbeddedXMLContent [1..1]
Used In	ContentObject

484

<b>Element</b>	<b>keyXMLContent</b>
Type	XML content from any namespace other than the DE 2.0 namespace
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	A container element for collected fragments of valid XML.
Comments	<ol style="list-style-type: none"> <li>1. Extracts must come from the XML document contained within the <code>&lt;embeddedXMLContent&gt;</code> element within the current <code>&lt;contentObject&gt;</code> block.</li> <li>2. All content within this element <b>MUST</b> be explicitly namespaced as defined in the enclosing <code>&lt;contentObject&gt;</code> tag.</li> <li>3. <b>MUST</b> be a properly formed -escaped if necessary- XML string.</li> </ol>
Used In	contentXML

<b>Element</b>	<b>KeyXMLContent</b>
Type	XML content from any namespace other than the DE 2.0 namespace
Usage	<b>OPTIONAL</b> , MAY use once and only once
Definition	A container element for collected fragments of valid XML.
Comments	<ol style="list-style-type: none"> <li>1. Extracts must come from the XML document contained within the <code>&lt;EmbeddedXMLContent&gt;</code> element within the current <code>&lt;ContentObject&gt;</code> block.</li> <li>2. All content within this element <b>MUST</b> be explicitly namespaced as defined in the enclosing <code>&lt;ContentObject&gt;</code> tag.</li> <li>3. <b>MUST</b> be a properly formed -escaped if necessary- XML string.</li> </ol>
Used In	ContentXML

485

<b>Element</b>	<b>embeddedXMLContent</b>
Type	XML content from any namespace other than the DE 2.0 namespace
Usage	<b>CONDITIONAL</b> , <b>REQUIRED</b> if parent element contentXml is present, <b>MAY</b> use only one per content object
Definition	The <code>&lt;embeddedXMLContent&gt;</code> element is an open container for valid XML from an explicit namespaced XML Schema.
Comments	<ol style="list-style-type: none"> <li>1. The content <b>MUST</b> be a separately-namespaced well-formed XML document.</li> </ol>

	<p>2. The enclosed XML content <b>MUST</b> be explicitly namespaced as defined in the enclosing <code>&lt;embeddedXMLContent&gt;</code> tag.</p> <p>3. Enclosed XML content may be encrypted and/or signed within this element.</p> <p>4. This element <b>MUST</b> be present if parent element, <code>contentXML</code>, is present.</p>
Used In	contentXML
<b>Element</b>	<b>EmbeddedXMLContent</b>
Type	XML content from any namespace other than the DE 2.0 namespace
Usage	<b>CONDITIONAL</b> , REQUIRED if parent element ContentXml is present, MAY use only one per content object
Definition	The <code>&lt;EmbeddedXMLContent&gt;</code> element is an open container for valid XML from an explicit namespaced XML Schema.
Comments	<p>1. The content <b>MUST</b> be a separately-namespaced well-formed XML document.</p> <p>2. The enclosed XML content <b>MUST</b> be explicitly namespaced as defined in the enclosing <code>&lt;EmbeddedXMLContent&gt;</code> tag.</p> <p>3. Enclosed XML content may be encrypted and/or signed within this element.</p> <p>4. This element <b>MUST</b> be present if parent element, <code>ContentXML</code>, is present.</p>
Used In	ContentXML

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487  
488

### 489 3.2.9 **e**Explicit Addressing

<b>Element</b>	<b>explicitAddressScheme</b>
Type	ct:EDXLStringType
Usage	<b>REQUIRED</b> , MUST use once and only once
Definition	Identifies the distribution addressing scheme used.
Comments	1. MUST be a properly formed -escaped if necessary- XML string.
Used In	explicitAddress
<b>Element</b>	<b>ExplicitAddressScheme</b>
Type	ct:EDXLStringType
Usage	<b>REQUIRED</b> , MUST use once and only once
Definition	Identifies the distribution addressing scheme used.
Comments	1. MUST be a properly formed -escaped if necessary- XML string.
Used In	ExplicitAddress

490



<b>Element</b>	<b>explicitAddressValue</b>
Type	ct:EDXLStringType
Usage	<b>REQUIRED</b> , MAY use multiple
Definition	A properly formed -escaped if necessary- XML string denoting the addressees value.
Comments	1. MUST be a properly formed -escaped if necessary- XML string.
Used In	explicitAddress
<b>Element</b>	<b>ExplicitAddressValue</b>
Type	ct:EDXLStringType
Usage	<del><b>REQUIRED</b>, MAY use multiple</del>
Definition	<del>A properly formed -escaped if necessary- XML string denoting the addressees value.</del>
Comments	<del>1. MUST be a properly formed -escaped if necessary- XML string.</del>
Used In	<del>ExplicitAddress</del>

---

## 492 **4 Conformance**

493 An XML 1.0 element is a conforming EDXL-DE-v2.0 Message if and only if:

494 a) it meets the general requirements specified in Section 3;

495 b) if its namespace name is "urn:oasis:names:tc:emergency:EDXL:DE:2.0", and the element is valid  
496 according to the schema located at [http://docs.oasis-open.org/emergency/EDXL-DE-v2.0/EDXL-DE-  
v2.0.xsd](http://docs.oasis-open.org/emergency/EDXL-DE-v2.0/EDXL-DE-<br/>497 v2.0.xsd)

498 c) if its namespace name is "urn:oasis:names:tc:emergency:EDXL:DE:2.0", then its content(which in-  
499 cludes the content of each of its descendants) meets all the additional mandatory requirements provided  
500 in the specific subsection of Section 3 corresponding to the element's name.

501

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502 **Appendix A Acknowledgments**

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516

517

518

519

520

## Appendix B EDXL-DistributionElement XML Schema

521 The EDXL-DistributionElement XML Schema is provided here for convenience, the schema can be down-  
 522 loaded at the OASIS website: <http://docs.oasis-open.org/emergency/>  
 523

```

524 <?xml version="1.0" encoding="UTF-8"?>
525 <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
526 xmlns:xlink="http://www.w3.org/1999/xlink"
527 xmlns:edxl-gsf="urn:oasis:names:tc:emergency:edxl:gsf:1.0"
528 xmlns:ct="urn:oasis:names:tc:emergency:edxl:ct:1.0" xm-
529 lns="urn:oasis:names:tc:emergency:EDXL:DE:2.0"
530 xmlns:gml="http://www.opengis.net/gml/3.2" target-
531 Namespace="urn:oasis:names:tc:emergency:EDXL:DE:2.0"
532 elementFormDefault="qualified" attributeFormDefault="unqualified" ver-
533 sion="1.0CD">
534 <xs:import namespace="http://www.w3.org/1999/xlink" schemaLocation="./other-support-
535 ing-schema/xlink.xsd"/>
536 <xs:import namespace="urn:oasis:names:tc:emergency:edxl:gsf:1.0" schemaLoca-
537 tion="./other-supporting-schema/EDXLCT_wd05/edxl-gsf.v1.0.xsd"/>
538 <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ct:1.0" schemaLoca-
539 tion="./edxl-de-dvl-v2.0-wd09.xsd"/>
540 <xs:element name="EDXLDistribution" type="DEDistributionType"/>
541 <xs:complexType name="DEDistributionType">
542 <xs:complexContent>
543 <xs:extension base="DEEnvelopeType">
544 <xs:sequence>
545 <xs:element ref="Descriptor" minOccurs="0" maxOccurs="1"/>
546 <xs:element ref="Content" minOccurs="0" maxOccurs="1"/>
547 <xs:element name="Other" type="AnyXMLType" minOccurs="0" maxOccurs="unbound-
548 ed"/>
549 </xs:sequence>
550 <xs:attributeGroup ref="xlink:extendedAttrs"/>
551 </xs:extension>
552 </xs:complexContent>
553 </xs:complexType>
554 <xs:complexType name="DEEnvelopeType">
555 <xs:sequence>
556 <xs:element name="DistributionID" type="ct:EDXLStringType" minOccurs="1"/>
557 <xs:element name="SenderID" type="ct:EDXLStringType" minOccurs="1"/>
558 <xs:element name="DateTimeSent" type="ct:EDXLDateTimeType" minOccurs="1"/>
559 <xs:element name="DateExpires" type="ct:EDXLDateTimeType" minOccurs="1"/>
560 <xs:element name="DistributionStatus" type="DistributionStatusType" minOc-
561 curs="1"/>
562 <xs:element name="DistributionKind" type="DistributionType" minOccurs="1"/>
563 </xs:sequence>
564 </xs:complexType>
565 <xs:element name="Descriptor" type="DEDescriptorType"/>
566 <xs:complexType name="DEDescriptorType">
567 <xs:sequence>
568 <xs:element name="CombinedConfidentiality" type="ConfidentialityType" minOc-
569 curs="0"/>
570 <xs:element name="Language" type="xs:language" minOccurs="0"/>
571 <xs:element name="SenderRole" type="ct:ValueListType" minOccurs="0" maxOc-
572 curs="unbounded"/>
573 <xs:element name="RecipientRole" type="ct:ValueListType" minOccurs="0" maxOc-
574 curs="unbounded"/>
575 <xs:element name="Keyword" type="ct:ValueListType" minOccurs="0" maxOccurs="un-
576 bounded"/>
577 <xs:element name="ExplicitAddress" type="ValueSchemeType" minOccurs="0" maxOc-
578 curs="unbounded"/>
579 <xs:element name="TargetAreas" type="TargetAreasType" minOccurs="0" maxOc-
580 curs="unbounded"/>
581 <xs:element name="Urgency" type="UrgencyType" minOccurs="0"/>

```

```

582 -----<xs:element name="Severity" type="SeverityType" minOccurs="0"/>
583 -----<xs:element name="Certainty" type="CertaintyType" minOccurs="0"/>
584 -----<xs:element name="IncidentID" type="ct:EDXLStringType" minOccurs="0" maxOc-
585 curs="unbounded"/>
586 -----<xs:element name="IncidentDescription" type="ct:EDXLStringType" minOccurs="0"--
587 maxOccurs="unbounded"/>
588 -----<xs:element ref="Link" minOccurs="0" maxOccurs="unbounded"/>
589 -----</xs:sequence>
590 -----<xs:attributeGroup ref="xlink:resourceAttrs"/>
591 -----</xs:complexType>
592 -----<xs:element name="Content" type="DEContentType"/>
593 -----<xs:complexType name="DEContentType">
594 -----<xs:sequence>
595 -----<xs:element ref="ContentObject" minOccurs="1" maxOccurs="unbounded"/>
596 -----<xs:element ref="Link" minOccurs="0" maxOccurs="unbounded"/>
597 -----</xs:sequence>
598 -----<xs:attributeGroup ref="xlink:resourceAttrs"/>
599 -----</xs:complexType>
600 -----<xs:element name="Link" type="DELinkType"/>
601 -----<xs:complexType name="DELinkType">
602 -----<xs:attributeGroup ref="xlink:arcAttrs"/>
603 -----</xs:complexType>
604 -----<xs:element name="ContentDescriptor" type="DEContentDescriptorType"/>
605 -----<xs:complexType name="DEContentDescriptorType">
606 -----<xs:sequence>
607 -----<xs:element name="ContentDescription" type="ct:EDXLStringType" minOccurs="0"--
608 maxOccurs="1"/>
609 -----<xs:element name="ContentKeyword" type="ct:ValueListType" minOccurs="0" maxOc-
610 curs="unbounded"/>
611 -----<xs:element name="OriginatorRole" type="ct:ValueListType" minOccurs="0" maxOc-
612 curs="unbounded"/>
613 -----<xs:element name="ConsumerRole" type="ct:ValueListType" minOccurs="0" maxOc-
614 curs="unbounded"/>
615 -----<xs:element name="ContentID" type="ct:EDXLStringType" minOccurs="0" maxOc-
616 curs="unbounded"/>
617 -----<xs:element name="Confidentiality" type="ConfidentialityType" minOccurs="0"--
618 maxOccurs="1"/>
619 -----<xs:element name="ContentLanguage" type="xs:language" minOccurs="0" maxOc-
620 curs="1"/>
621 -----</xs:sequence>
622 -----</xs:complexType>
623 -----<xs:element name="ContentObject" type="DEContentObjectType"/>
624 -----<xs:complexType name="DEContentObjectType">
625 -----<xs:sequence>
626 -----<xs:element ref="ContentDescriptor" minOccurs="0" maxOccurs="1"/>
627 -----<xs:choice minOccurs="1" maxOccurs="1">
628 -----<xs:element name="ContentXML" type="ContentXmlType"/>
629 -----<xs:element name="OtherContent" type="OtherContentType"/>
630 -----</xs:choice>
631 -----<xs:element name="Other" type="AnyXMLType" minOccurs="0" maxOccurs="unbounded"/>
632 -----</xs:sequence>
633 -----<xs:attributeGroup ref="xlink:resourceAttrs"/>
634 -----</xs:complexType>
635 -----<xs:complexType name="OtherContentType" mixed="false">
636 -----<xs:sequence>
637 -----<xs:element name="MimeType" type="ct:EDXLStringType" minOccurs="1"/>
638 -----<xs:element name="Size" type="xs:integer" minOccurs="0"/>
639 -----<xs:element name="Digest" type="xs:base64Binary" minOccurs="0"/>
640 -----<xs:element name="Uri" type="xs:anyURI" minOccurs="0"/>
641 -----<xs:element name="ContentData" type="xs:base64Binary" minOccurs="0" />
642 -----</xs:sequence>
643 -----</xs:complexType>
644 -----<xs:complexType name="ContentXmlType" mixed="false">
645 -----<xs:sequence>
646 -----<xs:element name="KeyXMLContent" type="AnyXMLType" minOccurs="0" maxOccurs="1"/>

```

```

647 -----<xs:element name="EmbeddedXMLContent" type="AnyXMLType" minOccurs="1" maxOc-
648 curs="1"/>
649 -----</xs:sequence>
650 -----</xs:complexType>
651 -----<xs:complexType name="AnyXMLType">
652 -----<xs:sequence>
653 -----<xs:any namespace="##other" processContents="lax" maxOccurs="1"/>
654 -----</xs:sequence>
655 -----<xs:anyAttribute namespace="##other" processContents="lax"/>
656 -----</xs:complexType>
657 -----<xs:complexType name="TargetAreasType">
658 -----<xs:sequence>
659 -----<xs:element name="AreaKind" type="AreaKindType" minOccurs="1" maxOccurs="1"/>
660 -----<xs:element name="AreaGrouping" type="AreaGroupingType" minOccurs="1" maxOc-
661 curs="1"/>
662 -----<xs:element name="TargetArea" type="TargetAreaType" minOccurs="1" maxOccurs="un-
663 bounded"/>
664 -----</xs:sequence>
665 -----</xs:complexType>
666 -----<xs:complexType name="TargetAreaType">
667 -----<xs:choice>
668 -----<xs:element ref="edxl_gsf:EDXLGeoLocation" minOccurs="1" maxOccurs="1"/>
669 -----<xs:element name="GeoPoliticalLocation" type="ct:EDXLGeoPoliticalLocationType"
670 minOccurs="1" maxOccurs="1"/>
671 -----</xs:choice>
672 -----</xs:complexType>
673 -----<xs:complexType name="ValueSchemeType">
674 -----<xs:sequence>
675 -----<xs:element name="ExplicitAddressScheme" type="ct:EDXLStringType"/>
676 -----<xs:element name="ExplicitAddressValue" type="ct:EDXLStringType" minOccurs="1"
677 maxOccurs="unbounded"/>
678 -----</xs:sequence>
679 -----</xs:complexType>
680 -----<xs:complexType name="AreaKindType">
681 -----<xs:choice>
682 -----<xs:element name="AreaKindValueList" type="ct:ValueKeyType"/>
683 -----<xs:element name="AreaKindDefault" type="ct:AreaKindDefaultType"/>
684 -----</xs:choice>
685 -----</xs:complexType>
686 -----<xs:simpleType name="AreaGroupingType">
687 -----<xs:restriction base="xs:string">
688 -----<xs:enumeration value="Intersection"/>
689 -----<xs:enumeration value="Union"/>
690 -----<xs:enumeration value="ExclusiveOr"/>
691 -----<xs:enumeration value="Complement"/>
692 -----<xs:enumeration value="OtherGroupingType"/></xs:enumeration>
693 -----</xs:restriction>
694 -----</xs:simpleType>
695 -----<xs:complexType name="ConfidentialityType">
696 -----<xs:choice>
697 -----<xs:element name="ConfidentialityValueList" type="ct:ValueKeyType"/>
698 -----<xs:element name="ConfidentialityDefault" type="ct:ConfidentialityDefaultType"/>
699 -----</xs:choice>
700 -----</xs:complexType>
701 -----<xs:complexType name="CertaintyType">
702 -----<xs:choice>
703 -----<xs:element name="CertaintyValueList" type="ct:ValueKeyType"/>
704 -----<xs:element name="CertaintyDefault" type="ct:CertaintyDefaultType"/>
705 -----</xs:choice>
706 -----</xs:complexType>
707 -----<xs:complexType name="DistributionType">
708 -----<xs:choice>
709 -----<xs:element name="DistributionKindValueList" type="ct:ValueKeyType"/>
710 -----<xs:element name="DistributionKindDefault" type="ct:DistributionDefaultType"/>
711 -----</xs:choice>

```

```

712 </xs:complexType>
713 <xs:complexType name="DistributionStatusType">
714 <xs:choice>
715 <xs:element name="StatusKindValueList" type="ct:ValueKeyType"/>
716 <xs:element name="StatusKindDefault" type="ct:StatusKindDefaultType"/>
717 </xs:choice>
718 </xs:complexType>
719 <xs:complexType name="SeverityType">
720 <xs:choice>
721 <xs:element name="SeverityValueList" type="ct:ValueKeyType"/>
722 <xs:element name="SeverityDefault" type="ct:SeverityDefaultType"/>
723 </xs:choice>
724 </xs:complexType>
725 <xs:complexType name="UrgencyType">
726 <xs:choice>
727 <xs:element name="UrgencyValueList" type="ct:ValueKeyType"/>
728 <xs:element name="UrgencyDefault" type="ct:UrgencyDefaultType"/>
729 </xs:choice>
730 </xs:complexType>
731 </xs:schema>
732

```

```

734
735 <?xml version="1.0" encoding="UTF-8"?>
736 <!--
737 Emergency Data Exchange Language (EDXL) Distribution Element Version 2.0
738 Committee Specification Draft 02 / Public Review Draft 02
739 10 April 2013
740 Copyright (c) OASIS Open 2012. All Rights Reserved.
741 Source: http://docs.oasis-open.org/emergency/edxl-de/v2.0/csprd03/schema/
742 -->
743 <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
744 xmlns:xlink="http://www.w3.org/1999/xlink"
745 xmlns:edxl-gsf="urn:oasis:names:tc:emergency:edxl:gsf:1.0"
746 xmlns:ct="urn:oasis:names:tc:emergency:edxl:ct:1.0"
747 xmlns="urn:oasis:names:tc:emergency:EDXL:DE:2.0"
748 xmlns:gml="http://www.opengis.net/gml/3.2"
749 xmlns:ext="urn:oasis:names:tc:emergency:edxl:extension:1.0"
750 targetNamespace="urn:oasis:names:tc:emergency:EDXL:DE:2.0"
751 elementFormDefault="qualified" attributeFormDefault="unqualified" ver-
752 sion="1.0CD">
753 <xs:import namespace="http://www.w3.org/1999/xlink" schemaLocation="./oth-
754 er-supporting-schema/xlink.xsd"/>
755 <xs:import namespace="urn:oasis:names:tc:emergency:edxl:gsf:1.0"
756 schemaLocation="./other-supporting-schema/EDXLCT_wd06/edxl-gsf.v1.0.xsd"/>
757 <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ct:1.0"
758 schemaLocation="./other-supporting-schema/EDXLCT_wd06/edxl-ct-v1.0-
759 wd05.xsd"/>
760
761 <xs:import namespace="urn:oasis:names:tc:emergency:edxl:extension:1.0"
762 schemaLocation="./other-supporting-schema/EDXLCT_wd06/edxl-ext-v1.0.xsd"/>
763
764 <xs:element name="edxlDistribution" type="DEDistributionType"/>
765 <xs:complexType name="DEDistributionType">
766 <xs:complexContent>
767 <xs:extension base="DEEnvelopeType">
768 <xs:sequence>
769 <xs:element ref="descriptor" minOccurs="0" maxOccurs="1"/>
770 <xs:element ref="content" minOccurs="0" maxOccurs="1"/>
771 <xs:element name="other" type="AnyXMLType" minOccurs="0" maxOccurs="unboun-
772 ded"/>
773 </xs:sequence>
774 <xs:attributeGroup ref="xlink:extendedAttrs"/>
775 </xs:extension>
776 </xs:complexContent>

```

```

777 </xs:complexType>
778 <xs:complexType name="DEEnvelopeType">
779 <xs:sequence>
780 <xs:element name="distributionID" type="ct:EDXLStringType" minOccurs="1"/>
781 <xs:element name="senderID" type="ct:EDXLStringType" minOccurs="1"/>
782 <xs:element name="dateTimeSent" type="ct:EDXLDateTimeType" minOccurs="1"/>
783 <xs:element name="dateTimeExpires" type="ct:EDXLDateTimeType" minOccurs="1"/>
784 <xs:element name="distributionStatus" type="DistributionStatusType" minOccurs="1"/>
785 <xs:element name="distributionKind" type="DistributionKindType" minOccurs="1"/>
786 <xs:element ref="ext:extension" minOccurs="0" maxOccurs="unbounded" />
787 </xs:sequence>
788 </xs:complexType>
789 <xs:element name="descriptor" type="DEDescriptorType"/>
790 <xs:complexType name="DEDescriptorType">
791 <xs:sequence>
792 <xs:element name="combinedConfidentiality" type="ConfidentialityType" minOccurs="0"/>
793 <xs:element name="language" type="xs:language" minOccurs="0"/>
794 <xs:element name="senderRole" type="ct:ValueListType" minOccurs="0" maxOccurs="unbounded"/>
795 <xs:element name="recipientRole" type="ct:ValueListType" minOccurs="0" maxOccurs="unbounded"/>
796 <xs:element name="keyword" type="ct:ValueListType" minOccurs="0" maxOccurs="unbounded"/>
797 <xs:element name="explicitAddress" type="ValueSchemeType" minOccurs="0" maxOccurs="unbounded"/>
798 <xs:element name="targetAreas" type="TargetAreasType" minOccurs="0" maxOccurs="unbounded"/>
799 <xs:element name="urgency" type="UrgencyType" minOccurs="0"/>
800 <xs:element name="severity" type="SeverityType" minOccurs="0"/>
801 <xs:element name="certainty" type="CertaintyType" minOccurs="0"/>
802 <xs:element name="incidentID" type="ct:EDXLStringType" minOccurs="0" maxOccurs="unbounded"/>
803 <xs:element name="incidentDescription" type="ct:EDXLStringType" minOccurs="0" maxOccurs="unbounded"/>
804 <xs:element ref="link" minOccurs="0" maxOccurs="unbounded"/>
805 <xs:element ref="ext:extension" minOccurs="0" maxOccurs="unbounded" />
806 </xs:sequence>
807 <xs:attributeGroup ref="xlink:resourceAttrs"/>
808 </xs:complexType>
809 <xs:element name="content" type="DEContentType"/>
810 <xs:complexType name="DEContentType">
811 <xs:sequence>
812 <xs:element ref="contentObject" minOccurs="1" maxOccurs="unbounded"/>
813 <xs:element ref="link" minOccurs="0" maxOccurs="unbounded"/>
814 </xs:sequence>
815 <xs:attributeGroup ref="xlink:resourceAttrs"/>
816 </xs:complexType>
817 <xs:element name="link" type="DELinkType"/>
818 <xs:complexType name="DELinkType">
819 <xs:attributeGroup ref="xlink:arcAttrs"/>
820 </xs:complexType>
821 <xs:element name="contentDescriptor" type="DEContentDescriptorType"/>
822 <xs:complexType name="DEContentDescriptorType">
823 <xs:sequence>
824 <xs:element name="contentDescription" type="ct:EDXLStringType" minOccurs="0" maxOccurs="1"/>
825 <xs:element name="contentKeyword" type="ct:ValueListType" minOccurs="0" maxOccurs="unbounded"/>
826 <xs:element name="originatorRole" type="ct:ValueListType" minOccurs="0" maxOccurs="unbounded"/>
827 <xs:element name="consumerRole" type="ct:ValueListType" minOccurs="0" maxOccurs="unbounded"/>
828 <xs:element name="contentID" type="ct:EDXLStringType" minOccurs="0" maxOccurs="unbounded"/>

```



```

842     <xs:element name="confidentiality" type="ConfidentialityType" minOccurs="0"
843     maxOccurs="1"/>
844     <xs:element name="contentLanguage" type="xs:language" minOccurs="0" maxOc-
845     curs="1"/>
846     <xs:element ref="ext:extension" minOccurs="0" maxOccurs="unbounded"/>
847   </xs:sequence>
848 </xs:complexType>
849 <xs:element name="contentObject" type="DEContentObjectType"/>
850 <xs:complexType name="DEContentObjectType">
851   <xs:sequence>
852     <xs:element ref="contentDescriptor" minOccurs="0" maxOccurs="1"/>
853     <xs:choice minOccurs="1" maxOccurs="1">
854       <xs:element name="contentXML" type="ContentXmlType"/>
855       <xs:element name="otherContent" type="OtherContentType"/>
856     </xs:choice>
857     <xs:element name="other" type="AnyXMLType" minOccurs="0" maxOccurs="unbounded"/>
858   </xs:sequence>
859   <xs:attributeGroup ref="xlink:resourceAttrs"/>
860 </xs:complexType>
861 <xs:complexType name="OtherContentType" mixed="false">
862   <xs:sequence>
863     <xs:element name="mimeType" type="ct:EDXLStringType" minOccurs="1"/>
864     <xs:element name="size" type="xs:integer" minOccurs="0"/>
865     <xs:element name="digest" type="xs:base64Binary" minOccurs="0"/>
866     <xs:choice>
867       <xs:sequence>
868         <xs:element name="uri" type="xs:anyURI" />
869         <xs:element name="contentData" type="xs:base64Binary" minOccurs="0"/>
870       </xs:sequence>
871       <xs:element name="contentData" type="xs:base64Binary" />
872     </xs:choice>
873   </xs:sequence>
874 </xs:complexType>
875 <xs:complexType name="ContentXmlType" mixed="false">
876   <xs:sequence>
877     <xs:element name="keyXMLContent" type="AnyXMLType" minOccurs="0" maxOccurs="1"/>
878     <xs:element name="embeddedXMLContent" type="AnyXMLType" minOccurs="1" maxOc-
879     curs="1"/>
880   </xs:sequence>
881 </xs:complexType>
882 <xs:complexType name="AnyXMLType">
883   <xs:sequence>
884     <xs:any namespace="##other" processContents="strict" maxOccurs="1"/>
885   </xs:sequence>
886   <xs:anyAttribute namespace="##other" processContents="lax"/>
887 </xs:complexType>
888 <xs:complexType name="TargetAreasType">
889   <xs:sequence>
890     <xs:element name="areaKind" type="AreaKindType" minOccurs="1" maxOccurs="1"/>
891     <xs:element name="areaGrouping" type="AreaGroupingType" minOccurs="1" maxOc-
892     curs="1"/>
893     <xs:element name="targetArea" type="TargetAreaType" minOccurs="1" maxOc-
894     curs="unbounded"/>
895   </xs:sequence>
896 </xs:complexType>
897 <xs:complexType name="TargetAreaType">
898   <xs:choice>
899     <xs:element ref="edxl-gsf:EDXLGeoLocation" minOccurs="1" maxOccurs="1"/>
900     <xs:element name="geoPoliticalLocation" type="ct:EDXLGeoPoliticalLocationType"
901     minOccurs="1" maxOccurs="1"/>
902   </xs:choice>
903 </xs:complexType>
904 <xs:complexType name="ValueSchemeType">
905   <xs:sequence>
906

```

```

907     <xs:element name="explicitAddressScheme" type="ct:EDXLStringType"/>
908     <xs:element name="explicitAddressValue" type="ct:EDXLStringType" minOccurs="1"
909 maxOccurs="unbounded"/>
910   </xs:sequence>
911 </xs:complexType>
912 <xs:simpleType name="AreaKindType">
913   <xs:restriction base="ct:EDXLStringType">
914     <xs:enumeration value="SourceTargetArea"/>
915     <xs:enumeration value="DistributionTargetArea"/>
916     <xs:enumeration value="OtherTargetArea"/>
917     <xs:enumeration value="Unknown"/>
918     <xs:enumeration value="NoAppropriateDefault"/>
919   </xs:restriction>
920 </xs:simpleType>
921 <xs:simpleType name="AreaGroupingType">
922   <xs:restriction base="ct:EDXLStringType">
923     <xs:enumeration value="Intersection"/>
924     <xs:enumeration value="Union"/>
925     <xs:enumeration value="ExclusiveOr"/>
926     <xs:enumeration value="Complement"/>
927     <xs:enumeration value="OtherGroupingType"/>
928     <xs:enumeration value="Unknown"/>
929     <xs:enumeration value="NoAppropriateDefault"/>
930   </xs:restriction>
931 </xs:simpleType>
932 <xs:simpleType name="ConfidentialityType">
933   <xs:restriction base="ct:EDXLStringType">
934     <xs:enumeration value="Unclassified"/>
935     <xs:enumeration value="Classified"/>
936   </xs:restriction>
937 </xs:simpleType>
938 <xs:simpleType name="CertaintyType">
939   <xs:restriction base="ct:EDXLStringType">
940     <xs:enumeration value="Observed"/>
941     <xs:enumeration value="Likely"/>
942     <xs:enumeration value="Possible"/>
943     <xs:enumeration value="Unlikely"/>
944     <xs:enumeration value="Unknown"/>
945     <xs:enumeration value="NoAppropriateDefault"/>
946   </xs:restriction>
947 </xs:simpleType>
948 <xs:simpleType name="DistributionKindType">
949   <xs:restriction base="ct:EDXLStringType">
950     <xs:enumeration value="Report"/>
951     <xs:enumeration value="Update"/>
952     <xs:enumeration value="Cancel"/>
953     <xs:enumeration value="Request"/>
954     <xs:enumeration value="Response"/>
955     <xs:enumeration value="Dispatch"/>
956     <xs:enumeration value="Ack"/>
957     <xs:enumeration value="Error"/>
958     <xs:enumeration value="SensorConfiguration"/>
959     <xs:enumeration value="SensorControl"/>
960     <xs:enumeration value="SensorStatus"/>
961     <xs:enumeration value="SensorDetection"/>
962     <xs:enumeration value="Unknown"/>
963     <xs:enumeration value="NoAppropriateDefault"/>
964   </xs:restriction>
965 </xs:simpleType>
966 <xs:simpleType name="DistributionStatusType">
967   <xs:restriction base="ct:EDXLStringType">
968     <xs:enumeration value="Actual"/>
969     <xs:enumeration value="Exercise"/>
970     <xs:enumeration value="System"/>
971     <xs:enumeration value="Test"/>

```

```
972     <xs:enumeration value="Unknown"/>
973     <xs:enumeration value="NoAppropriateDefault"/>
974   </xs:restriction>
975 </xs:simpleType>
976 <xs:simpleType name="SeverityType">
977   <xs:restriction base="ct:EDXLStringType">
978     <xs:enumeration value="Extreme"/>
979     <xs:enumeration value="Severe"/>
980     <xs:enumeration value="Moderate"/>
981     <xs:enumeration value="Minor"/>
982     <xs:enumeration value="Unknown"/>
983     <xs:enumeration value="NoAppropriateDefault"/>
984   </xs:restriction>
985 </xs:simpleType>
986 <xs:simpleType name="UrgencyType">
987   <xs:restriction base="ct:EDXLStringType">
988     <xs:enumeration value="Immediate"/>
989     <xs:enumeration value="Expected"/>
990     <xs:enumeration value="Future"/>
991     <xs:enumeration value="Past"/>
992     <xs:enumeration value="Unknown"/>
993     <xs:enumeration value="NoAppropriateDefault"/>
994   </xs:restriction>
995 </xs:simpleType>
996 </xs:schema>
997
```

998

---

## Appendix C ~~EDXL-DistributionElement 2.0 Defaults~~

999

### ~~XML Schema~~

1000

The ~~EDXL-DistributionElement 2.0 XML Schema~~ imports a separate schema for providing defaults. This defaults schema is provided below for convenience, but it is also available at: <http://docs.oasis-open.org/emergency/>

1001

1002

1003

## Appendix D EDXL-DistributionElement 2.0 Community Extension XML Schema

The EDXL-DistributionElement 2.0 XML Schema imports a separate schema for providing Community Extensions. This defaults schema is provided below for convenience, but it is also available at: <http://docs.oasis-open.org/emergency/>

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:ext="urn:oasis:names:tc:emergency:edxl:extension:1.0"
  xmlns:ct="urn:oasis:names:tc:emergency:edxl:ct:1.0"
  targetNamespace="urn:oasis:names:tc:emergency:edxl:extension:1.0"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xs:import namespace="urn:oasis:names:tc:emergency:edxl:ct:1.0"
    schemaLocation="./edxl-ct-v1.0-wd05.xsd"/>
  <xs:element name="extension">
    <xs:annotation>
      <xs:documentation>Base element to allow communities to extend/augment an EDXL
data standard</xs:documentation>
    </xs:annotation>
    <xs:complexType>
      <xs:sequence>
        <xs:element name="community" type="xs:anyURI">
          <xs:annotation>
            <xs:documentation>Unique identifier of the community</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="id" type="xs:anyURI">
          <xs:annotation>
            <xs:documentation>Unique identifier for this extension</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="parameter" type="ext:ParameterType" maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="ParameterType">
    <xs:annotation>
      <xs:documentation>Group of elements used to extend/augment an EDXL data stand-
ard</xs:documentation>
    </xs:annotation>
    <xs:sequence>
      <xs:element name="nameURI" type="ext:ParameterNameType">
        <xs:annotation>
          <xs:documentation>Unique identifier of a parameter</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="value" type="ext:ParameterValueType" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ParameterNameType">
    <xs:simpleContent>
      <xs:extension base="xs:anyURI">
        <xs:attribute name="XPath" type="xs:string" use="optional"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
  <xs:complexType name="ParameterValueType">
    <xs:simpleContent>
      <xs:extension base="ct:EDXLStringType">
        <xs:attribute name="uom" type="xs:string" use="optional"/>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
</xs:schema>
```

```

1065     </xs:simpleContent>
1066   </xs:complexType xmlns:ct="urn:oasis:names:tc:emergency:edxl:ct:1.0"
1067   targetNamespace="urn:oasis:names:tc:emergency:edxl:ct:1.0" elementFormDefault="qual-
1068   ified" attributeFormDefault="unqualified">
1069     <xs:include schemaLocation="./other-supporting-schema/EDXLCT_wd05/edxl-ct-v1.0-
1070     wd05.xsd"/>
1071     <!-- Default ValueLists -->
1072     <!-- ***** AREA KIND ***** -->
1073     <xs:simpleType name="AreaKindTypeDefaultURI">
1074       <xs:restriction base="ct:ValueListURIType">
1075         <xs:enumeration
1076         value="urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:AreaKindType"/>
1077       </xs:restriction>
1078     </xs:simpleType>
1079     <xs:simpleType name="AreaKindTypeDefaultValues">
1080       <xs:restriction base="ct:ValueType">
1081         <xs:enumeration value="SourceTargetArea"/>
1082         <xs:enumeration value="DistributionTargetArea"/>
1083         <xs:enumeration value="OtherTargetArea"/>
1084       </xs:restriction>
1085     </xs:simpleType>
1086     <xs:complexType name="AreaKindDefaultType">
1087       <xs:complexContent>
1088         <xs:restriction base="ct:ValueKeyType">
1089           <xs:sequence maxOccurs="1">
1090             <xs:element name="ValueListURI" type="ct:AreaKindTypeDefaultURI"/>
1091             <xs:element name="Value" type="ct:AreaKindTypeDefaultValues"/>
1092           </xs:sequence>
1093         </xs:restriction>
1094       </xs:complexContent>
1095     </xs:complexType>
1096     --
1097     <!-- ***** DISTRIBUTION TYPE ***** -->
1098     <xs:simpleType name="DisTypeDefaultURI">
1099       <xs:restriction base="ct:ValueListURIType">
1100         <xs:enumeration
1101         value="urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:DistributionType"/>
1102       </xs:restriction>
1103     </xs:simpleType>
1104     <xs:simpleType name="DistTypeDefaultValues">
1105       <xs:restriction base="ct:ValueType">
1106         <xs:enumeration value="Report"/>
1107         <xs:enumeration value="Update"/>
1108         <xs:enumeration value="Cancel"/>
1109         <xs:enumeration value="Request"/>
1110         <xs:enumeration value="Response"/>
1111         <xs:enumeration value="Dispatch"/>
1112         <xs:enumeration value="Ack"/>
1113         <xs:enumeration value="Error"/>
1114         <xs:enumeration value="SensorConfiguration"/>
1115         <xs:enumeration value="SensorControl"/>
1116         <xs:enumeration value="SensorStatus"/>
1117         <xs:enumeration value="SensorDetection"/>
1118       </xs:restriction>
1119     </xs:simpleType>
1120     <xs:complexType name="DistributionDefaultType">
1121       <xs:complexContent>
1122         <xs:restriction base="ct:ValueKeyType">
1123           <xs:sequence maxOccurs="1">
1124             <xs:element name="ValueListURI" type="ct:DisTy-
1125             peDefaultURI"/>
1126             <xs:element name="Value" type="ct:DistTypeDefaultVal-
1127             ues"/>
1128           </xs:sequence>
1129         </xs:restriction>

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1130 -----</xs:complexContent>
1131 -----</xs:complexType>
1132 -----<!-- ***** CONFIDENTIALITY ***** -->
1133 -----<xs:simpleType name="ConfidentialityTypeDefaultURI">
1134 -----<xs:restriction base="ct:ValueListURIType">
1135 -----<xs:enumeration
1136 value="urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:ConfidentialityType"/>
1137 -----</xs:restriction>
1138 -----</xs:simpleType>
1139 -----<xs:simpleType name="ConfidentialityTypeDefaultValues">
1140 -----<xs:restriction base="ct:ValueType">
1141 -----<xs:enumeration value="Unclassified"/>
1142 -----<xs:enumeration value="Classified"/>
1143 -----</xs:restriction>
1144 -----</xs:simpleType>
1145 -----<xs:complexType name="ConfidentialityDefaultType">
1146 -----<xs:complexContent>
1147 -----<xs:restriction base="ct:ValueKeyType">
1148 -----<xs:sequence maxOccurs="1">
1149 -----<xs:element name="ValueListURI" type="ct:Confidenti-
1150 alityTypeDefaultURI"/>
1151 -----<xs:element name="Value" type="ct:ConfidentialityTy-
1152 peDefaultValues"/>
1153 -----</xs:sequence>
1154 -----</xs:restriction>
1155 -----</xs:complexContent>
1156 -----</xs:complexType>
1157 -----<!-- ***** STATUS ***** -->
1158 -----<xs:simpleType name="StatusKindDefaultURI">
1159 -----<xs:restriction base="ct:ValueListURIType">
1160 -----<xs:enumeration
1161 value="urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:StatusKind"/>
1162 -----</xs:restriction>
1163 -----</xs:simpleType>
1164 -----<xs:simpleType name="StatusKindDefaultValues">
1165 -----<xs:restriction base="ct:ValueType">
1166 -----<xs:enumeration value="Actual"/>
1167 -----<xs:enumeration value="Exercise"/>
1168 -----<xs:enumeration value="System"/>
1169 -----<xs:enumeration value="Test"/>
1170 -----</xs:restriction>
1171 -----</xs:simpleType>
1172 -----<xs:complexType name="StatusKindDefaultType">
1173 -----<xs:complexContent>
1174 -----<xs:restriction base="ct:ValueKeyType">
1175 -----<xs:sequence maxOccurs="1">
1176 -----<xs:element name="ValueListURI" type="ct:StatusKind-
1177 DefaultURI"/>
1178 -----<xs:element name="Value" type="ct:StatusKindDefault-
1179 Values"/>
1180 -----</xs:sequence>
1181 -----</xs:restriction>
1182 -----</xs:complexContent>
1183 -----</xs:complexType>
1184 -----<!-- ***** CERTAINTY ***** -->
1185 -----<xs:simpleType name="CertaintyTypeDefaultURI">
1186 -----<xs:restriction base="ct:ValueListURIType">
1187 -----<xs:enumeration
1188 value="urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:Certainty"/>
1189 -----</xs:restriction>
1190 -----</xs:simpleType>
1191 -----<xs:simpleType name="CertaintyTypeDefaultValues">
1192 -----<xs:restriction base="ct:ValueType">
1193 -----<xs:enumeration value="Observed"/>
1194 -----<xs:enumeration value="Likely"/>

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1195 </xs:enumeration value="Possible"/>
1196 </xs:enumeration value="Unlikely"/>
1197 </xs:enumeration value="Unknown"/>
1198 </xs:restriction>
1199 </xs:simpleType>
1200 <xs:complexType name="CertaintyDefaultType">
1201 <xs:complexContent>
1202 <xs:restriction base="ct:ValueKeyType">
1203 <xs:sequence maxOccurs="1">
1204 <xs:element name="ValueListURI" type="ct:CertaintyTy-
1205 peDefaultURI"/>
1206 <xs:element name="Value" type="ct:CertaintyTy-
1207 peDefaultValues"/>
1208 </xs:sequence>
1209 </xs:restriction>
1210 </xs:complexContent>
1211 </xs:complexType>
1212 <!-- ***** SEVERITY ***** -->
1213 <xs:simpleType name="SeverityTypeDefaultURI">
1214 <xs:restriction base="ct:ValueListURIType">
1215 <xs:enumeration-
1216 value="urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:Severity"/>
1217 </xs:restriction>
1218 </xs:simpleType>
1219 <xs:simpleType name="SeverityTypeDefaultValues">
1220 <xs:restriction base="ct:ValueType">
1221 <xs:enumeration value="Extreme"/>
1222 <xs:enumeration value="Severe"/>
1223 <xs:enumeration value="Moderate"/>
1224 <xs:enumeration value="Minor"/>
1225 <xs:enumeration value="Unknown"/>
1226 </xs:restriction>
1227 </xs:simpleType>
1228 <xs:complexType name="SeverityDefaultType">
1229 <xs:complexContent>
1230 <xs:restriction base="ct:ValueKeyType">
1231 <xs:sequence maxOccurs="1">
1232 <xs:element name="ValueListURI" type="ct:SeverityTy-
1233 peDefaultURI"/>
1234 <xs:element name="Value" type="ct:SeverityTy-
1235 peDefaultValues"/>
1236 </xs:sequence>
1237 </xs:restriction>
1238 </xs:complexContent>
1239 </xs:complexType>
1240 <!-- ***** URGENCY ***** -->
1241 <xs:simpleType name="UrgencyTypeDefaultURI">
1242 <xs:restriction base="ct:ValueListURIType">
1243 <xs:enumeration-
1244 value="urn:oasis:names:tc:emergency:EDXL:DE:2.0:Defaults:Urgency"/>
1245 </xs:restriction>
1246 </xs:simpleType>
1247 <xs:simpleType name="UrgencyTypeDefaultValues">
1248 <xs:restriction base="ct:ValueType">
1249 <xs:enumeration value="Immediate"/>
1250 <xs:enumeration value="Expected"/>
1251 <xs:enumeration value="Future"/>
1252 <xs:enumeration value="Past"/>
1253 <xs:enumeration value="Unknown"/>
1254 </xs:restriction>
1255 </xs:simpleType>
1256 <xs:complexType name="UrgencyDefaultType">
1257 <xs:complexContent>
1258 <xs:restriction base="ct:ValueKeyType">
1259 <xs:sequence maxOccurs="1">

```



```
1260 <xs:element name="ValueListURI" type="ct:UrgencyTy-  
1261 peDefaultURI"/>  
1262 <xs:element name="Value" type="ct:UrgencyTypeDefault-  
1263 Values"/>  
1264 </xs:sequence>  
1265 </xs:restriction>  
1266 </xs:complexContent>  
1267 </xs:complexType>  
1268 <!--/Default ValueLists-->  
1269 </xs:schema>
```

1271

## Appendix E Revision History

Revision	Date	Editor	Changes Made
<a href="#">Edxl-de-v2.0-wd02</a>	<a href="#">26 Sept 2011</a>	<a href="#">Jeff Waters</a>	First Full Working Draft
<a href="#">Edxl-de-v2.0-wd03</a>	<a href="#">11 Oct 2011</a>	<a href="#">Jeff Waters</a>	Added recommended changes by Martena Gooch, as recorded in the document at <a href="http://www.oasis-open.org/apps/org/workgroup/emergency-if/download.php/43842/de-notes-fixed-in-wd02.doc">http://www.oasis-open.org/apps/org/workgroup/emergency-if/download.php/43842/de-notes-fixed-in-wd02.doc</a>
<a href="#">Edxl-de-v2.0-wd04</a>	<a href="#">18 Oct 2011</a>	<a href="#">Jeff Waters</a>	Added recommended changes by Martena Gooch.
<a href="#">Edxl-de-v2.0-wd05</a>	<a href="#">25 Oct 2011</a>	<a href="#">Jeff Waters</a>	Added recommended changes by Werner Joerg, including multiplicities for sub elements
<a href="#">Edxl-de-v2.0-wd08</a>	<a href="#">31 Jul 2012</a>	<a href="#">Jeff Waters</a>	Removed DistributionReference, added AreaGrouping, and addressed other recommended changes to add flexibility and streamline schema
<a href="#">Edxl-de-v2.0-wd09</a>	<a href="#">21 Aug 2012</a>	<a href="#">Jeff Waters</a>	Restored RecipientRole, SenderRole, Keyword, updated diagram, and performed other cleanup
<a href="#">Edxl-de-v2.0-wd11</a>	<a href="#">21 May 2013</a>	<a href="#">Jeff Waters</a>	Added extension element and schema, lower-cased element names, changed ValueList / Default choices with straight enumerations (since the extension mechanism allows for community-defined values)
Revision	Date	Editor	Changes Made
<a href="#">Edxl-de-v2.0-wd02</a>	<a href="#">26-Sept-2011</a>	<a href="#">Jeff Waters</a>	First Full Working Draft
<a href="#">Edxl-de-v2.0-wd03</a>	<a href="#">11-Oct-2011</a>	<a href="#">Jeff Waters</a>	Added recommended changes by Martena Gooch, as recorded in the document at <a href="http://www.oasis-open.org/apps/org/workgroup/emergency-if/download.php/43842/de-notes-fixed-in-wd02.doc">http://www.oasis-open.org/apps/org/workgroup/emergency-if/download.php/43842/de-notes-fixed-in-wd02.doc</a>
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<a href="#">Edxl-de-v2.0-wd05</a>	<a href="#">25-Oct-2011</a>	<a href="#">Jeff Waters</a>	Added recommended changes by Werner Joerg, including multiplicities for sub elements
<a href="#">Edxl-de-v2.0-wd08</a>	<a href="#">31-Jul-2012</a>	<a href="#">Jeff Waters</a>	Removed DistributionReference, added AreaGrouping, and addressed other recommended changes to add flexibility and streamline schema
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