



Common Alerting Protocol Version 1.1

Approved Errata

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OASIS Emergency Management TC

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Related work:

This specification is related to:

- [OASIS Common Alerting Protocol v1.1](#)

Related Schema:

<http://docs.oasis-open.org/emergency/cap/v1.1/errata/approved/cap.xsd>
<http://docs.oasis-open.org/emergency/cap/v1.1/errata/approved/cap-v1.1-asn.1.asn>

Abstract:

This document lists errata for the OASIS Common Alerting Protocol Version 1.1 OASIS Standard produced by the Emergency Management Technical Committee. The standard was approved by the OASIS membership on 1 October 2005.

Status:

This document was last revised or approved by the Emergency Management TC on the above date. The level of approval is also listed above. Check the "Latest Version" or "Latest Approved Version" location noted above for possible later revisions of this document.

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1 List of Changes

1.1 Section 1.6 Normative References

Added the following Normative References to support an equivalent ASN.1 representation of the CAP message

ITU-T X.680	ITU-T Recommendation X.680, <i>Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation</i> .
ITU-T X.691	ITU-T Recommendation X.691, <i>Information technology – ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)</i> .
ITU-T X.693	ITU-T Recommendation X.693, <i>Information technology – ASN.1 encoding rules: Specification of XML Encoding Rules (XER)</i> .
ITU-T X.694	ITU-T Recommendation X.694, <i>Information technology – ASN.1 encoding rules: Mapping W3C XML schema definitions into ASN.1</i> .

1.2 Correction to Section 3.4

Insert <enumeration value = “Assess”/ ”> to <element name = “responseType”... in the .xsd files section of the specification around line 337.

1.3 Add Section 3.5 for ASN.1

3.5 Use of ASN.1 to Specify and Encode the CAP Alert Message

3.5.1 General

The ASN.1 (see ITU-T Rec X.680) schema in 3.5.3 provides an alternative formulation of the XML schema defined in 3.4. If the ASN.1 Extended XML Encoding Rules (see ITU-T Rec X.693) are applied to this ASN.1 schema, the permitted XML is identical to that supported by the XML schema in 3.4. If the ASN.1 Unaligned Packed Encoding Rules (see ITU-T Rec X.691) are applied to it, the resulting binary encodings are more compact than the corresponding XML encodings.

3.5.2 Formal Mappings and Specification

The normative specification of the compact binary encoding is in 3.5.3 with the application of the ASN.1 Unaligned Packed Encoding Rules (see ITU-T Rec. X.691).

The semantics of the fields in the ASN.1 specification are identical to those of the XSD specification, and the mapping of the fields from the XSD specification to the ASN.1 specification is formally defined in ITU-T Rec. X.694.

Implementations can produce and process the CAP alert XML messages using either ASN.1-based or XSD-based tools (or other ad hoc software).

Implementations can produce and process the CAP alert compact binary messages using ASN.1-based tools (or by other ad hoc software).

Any XML encoded CAP alert messages can be converted to compact binary messages by decoding with an ASN.1 tool configured for the Extended XML Encoding Rules and re-encoding the resulting abstract values with an ASN.1 tool configured for Unaligned Packed Encoding Rules.

Any compact binary CAP alert messages can be converted to XML encoded messages by decoding with an ASN.1 tool configured for Unaligned Packed Encoding Rules and re-encoding the resulting abstract values with an ASN.1 tool configured for Extended XML Encoding Rules.

3.5.3 ASN.1 Schema

```
CAP-1-1 {itu-t recommendation x cap(1303) version1-1(1)}
DEFINITIONS XER INSTRUCTIONS AUTOMATIC TAGS ::=
-- CAP Alert Message (version 1.1)
BEGIN

Alert ::= SEQUENCE {
    identifier IdentifierString,
        -- Unambiguous identification of the message
        -- from all messages from
        -- this sender, in a format defined by the sender and
        -- identified in the "sender" field below.
    sender String,
        -- The globally unambiguous identification of the sender.
        -- This specification does not define the root of
        -- a global identification tree (there is no international
        -- agreement on such a root), so it relies
        -- on human-readable text to define globally and
        -- unambiguously the sender.
        -- An internet domain name or use of "iri:/ITU-T/..."
        -- are possible, but
        -- the choice needs to be clearly stated in human-readable form.
    sent DateTime,
    status AlertStatus,
    msgType AlertMessageType,
    source String OPTIONAL,
        -- Not standardised human-readable identification
        -- of the source of the alert.
    scope AlertScope,
    restriction String OPTIONAL,
        -- Not standardised human-readable restrictions
        -- on the distribution of the alert message
    addresses String OPTIONAL,
        -- A space separated list of addressees for private messages
        -- (see 3.2.1)
    code-list SEQUENCE SIZE((0..MAX)) OF code String,
        -- A sequence codes for special handling
        -- (see 3.2.1)
        -- The format and semantics of the codes are not defined in this
        -- specification.
    note String OPTIONAL,
        -- Not standardised human-readable clarifying text for the alert
        -- (see 3.2.1)
    references String OPTIONAL,
        -- Space-separated references to earlier messages
        -- (see 3.2.1)
    incidents String OPTIONAL,
        -- Space-separated references to related incidents
        -- (see 3.2.1)
    info-list SEQUENCE SIZE((0..MAX)) OF info AlertInformation }

AlertStatus ::= ENUMERATED {
    actual,
    draft,
    exercise,
    system,
    test }

AlertMessageType ::= ENUMERATED {
    ack,
    alert,
    cancel,
    error,
```

```

106         update }
107
108 AlertScope ::= ENUMERATED {
109     private,
110     public,
111     restricted }
112
113 AlertInformation ::= SEQUENCE {
114     language          Language -- DEFAULT "en-US" -- ,
115     -- The language used in this value of the Info type
116     -- (see 3.2.2)
117     category-list     SEQUENCE (SIZE(1..MAX)) OF
118                       category InformationCategory,
119     event             String,
120     -- Not standardised human-readable text describing the
121     -- type of the event (see 3.2.2)
122     responseType-list SEQUENCE SIZE((0..MAX)) OF
123                       responseType InformationResponseType,
124     urgency           HowUrgent,
125     severity          HowSevere,
126     certainty         HowCertain,
127     audience          String OPTIONAL,
128     -- Not standardised human-readable text describing the
129     -- intended audience for the message (see 3.2.2)
130     eventCode-list    SEQUENCE SIZE((0..MAX)) OF eventCode SEQUENCE {
131         valueName ValueName,
132         value      Value },
133     effective        DateTime OPTIONAL,
134     onset            DateTime OPTIONAL,
135     expires          DateTime OPTIONAL,
136     senderName       String OPTIONAL,
137     -- Not standardised human-readable name of the authority
138     -- issuing the message (see 3.2.2)
139     headline         String (SIZE (1..160,...)) OPTIONAL,
140     -- Not standardised human-readable short statement (headline)
141     -- of the alert (see 3.2.2)
142     description      String OPTIONAL,
143     -- Not standardised human-readable extended description of
144     -- the event (see 3.2.2)
145     instruction      String OPTIONAL,
146     -- Not standardised human-readable recommended action
147     -- (see 3.2.2)
148     web              AnyURI OPTIONAL,
149     contact          String OPTIONAL,
150     -- Not standardised human-readable contact details for
151     -- follow-up (see 3.2.2)
152     parameter-list   SEQUENCE SIZE((0..MAX)) OF parameter SEQUENCE {
153         -- System-specific parameters (see 3.2.2)
154         valueName ValueName,
155         value      Value },
156     resource-list     SEQUENCE SIZE((0..MAX)) OF resource ResourceFile,
157     area-list        SEQUENCE SIZE((0..MAX)) OF Area }
158
159 InformationCategory ::= ENUMERATED {
160     cBRNE,
161     env,
162     fire,
163     geo,
164     health,
165     infra,
166     met,
167     other,
168     rescue,
169     safety,

```

```

170         security,
171         transport }
172
173 InformationResponseType ::= ENUMERATED {
174     assess,
175     evacuate,
176     execute,
177     monitor,
178     none,
179     prepare,
180     shelter }
181
182 HowUrgent ::= ENUMERATED {
183     expected,
184     future,
185     immediate,
186     past,
187     unknown }
188
189 HowSevere ::= ENUMERATED {
190     extreme,
191     minor,
192     moderate,
193     severe,
194     unknown }
195
196 HowCertain ::= ENUMERATED {
197     likely,
198     observed,
199     possible,
200     unknown,
201     unlikely }
202
203 ResourceFile ::= SEQUENCE {
204     -- Information about an associated resource file
205     -- (see 3.2.3)
206     resourceDesc String,
207     -- Not standardised human-readable description of the type
208     -- and content of
209     -- an associated resource file (for example a map or
210     -- photograph)(see 3.2.3)
211     mimeType      String OPTIONAL,
212     size          INTEGER OPTIONAL, -- In bytes
213     uri           AnyURI OPTIONAL,
214     derefUri      String OPTIONAL,
215     -- An alternative to the URI giving the Base64-encoded
216     -- content of the resource file (see 3.2.3)
217     digest        String OPTIONAL
218     -- SHA-1 hash of the resource file for error detection
219     -- (see 3.2.3) -- }
220
221 Area ::= SEQUENCE {
222     -- Identification of an affected area
223     areaDesc      String,
224     -- Not standardised human-readable description of the area
225     polygon-list  SEQUENCE OF polygon String,
226     -- Each element is a space-separated list of coordinate pairs
227     -- The complete list starts and ends with the same point and
228     -- defines the polygon that defines the area
229     -- (see 3.2.4).
230     circle-list   SEQUENCE OF circle String,
231     -- A space-separated list of coordinates for a point and a radius
232     geocode-list  SEQUENCE SIZE((0..MAX)) OF geocode SEQUENCE {
233     -- A geographic code designating the alert target area

```



```

234      -- (see 3.2.4)
235      valueName ValueName,
236      value      Value },
237      altitude   String OPTIONAL,
238      -- Specific or minimum altitude of the affected area
239      ceiling    String OPTIONAL
240      -- Maximum altitude of the affected area -- }
241
242      ValueName ::= String -- A not standardised name for
243      -- an information event code, a parameter or a geocode
244
245      Value ::= String -- The value of the information event code,
246      -- parameter or geocode
247
248      String ::= UTF8String (FROM (
249      {0,0,0,9} -- TAB
250      | {0,0,0,10} -- CR
251      | {0,0,0,13} -- LF
252      | {0,0,0,32}..{0,0,215,255} -- Space to the start of the S-zone
253      | {0,0,224,0}..{0,0,255,253} -- Rest of BMP after S-zone
254      | {0,1,0,0}..{0,16,255,253} -- Other planes -- ) )
255
256      StringChar ::= String (SIZE(1))
257
258      SpaceAndComma ::= UTF8String (FROM (
259      {0,0,0,32} -- SPACE
260      | {0,0,0,44} -- COMMA -- ) )
261
262      IdentifierString ::= String (FROM (StringChar EXCEPT SpaceAndComma))
263
264      Language ::= VisibleString(FROM ("a".. "z" | "A".. "Z" | "-" | "0".. "9"))
265      (PATTERN "[a-zA-Z]#(1,8)(-[a-zA-Z0-9]#(1,8))*")
266      -- The semantics of Language is specified in IETF RFC 3066
267
268      DateTime ::= TIME (SETTINGS "Basic=Date-Time Date=YMD
269      Year=Basic Time=HMS Local-or-UTC=LD")
270      -- This is the ISO 8601 format using local time and a
271      -- time difference
272
273      StringWithNoCRLFHT ::= UTF8String (FROM (
274      {0,0,0,32}..{0,0,215,255}
275      | {0,0,224,0}..{0,0,255,253}
276      | {0,1,0,0}..{0,16,255,253}))
277
278      AnyURI ::= StringWithNoCRLFHT (CONSTRAINED BY {
279      /* Shall be a valid URI as defined in IETF RFC 2396 */})
280
281      ENCODING-CONTROL XER
282      GLOBAL-DEFAULTS MODIFIED-ENCODINGS
283      GLOBAL-DEFAULTS CONTROL-NAMESPACE
284      "http://www.w3.org/2001/XMLSchema-instance" PREFIX "xsi"
285      NAMESPACE ALL, ALL IN ALL AS "urn:oasis:names:tc:emergency:cap:1.1"
286      PREFIX "cap"
287      NAME Alert, Area AS UNCAPITALIZED
288      UNTAGGED SEQUENCE OF
289      DEFAULT-FOR-EMPTY AlertInformation.language AS "en-US"
290      TEXT AlertStatus:ALL,
291      AlertMessageType:ALL,
292      AlertScope:ALL,
293      InformationCategory:ALL,
294      InformationResponseType:ALL,
295      HowUrgent:ALL,
296      HowSevere:ALL,
297      HowCertain:ALL AS CAPITALIZED

```

298 WHITESPACE Language, AnyURI COLLAPSE
299 END

300
301
302
303
304