

Specification



OpenPeppol AISBL



**Peppol Transport Infrastructure
ICT - Models**

**Peppol Business Message Envelope
(SBDH)**



Version: 1.2.1

Status: In Use



Statement of originality

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Version History

Version	Date	Change log
1.0.0	2014-01-15	Initial version
1.1	2018-08-31	Added the possibility to specify document type identifier scheme and process identifier scheme Added the possibility to specify additional attributes
1.1.1	2018-09-28	Fixed error in chapter 2.5 in the example of an additional attribute without a value Added note on attribute case sensitivity in chapter 2.5
1.2	2019-02-01	Added section for non-XML payloads
1.2.1	2020-03-11	Added chapter 2.6 on the Internet Media Type Remove the references to the Peppol Policy for use of Identifiers 3.x Updated to the new branding

1 Introduction

The Peppol Message Envelope is a customization of the UN/CEFACT Standard Business Document Header (SBDH) [SBDH]. The customization represents a true subset of the standard XML Schemas and any instance conformant to this specification is also conformant to the SBDH.

The Peppol Message Envelope makes it possible for Access points to:

- Route messages without having to access to the business message/data
- Always use the same way of identifying sender/receiver, document type and process
- Overcome issues with namespace or versioning of the payload
- Provide additional attributes that help processing the payload

10 The Message Envelope can also carry some of the infrastructure elements when using protocols like AS2 or
11 AS4. The creation of the Message Envelope is RECOMMENDED to be done already in the system issuing the
12 business document but it may also be created by a service provider who is preparing the document for
13 transportation to the receiver's Access Point. This specification does not recommend any particular setup
14 with regard to this when the Message Envelope is not created in the issuing system.

15 1.1 Terminology

16 The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT",
17 "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC
18 2119 [RFC2119].

19 1.2 Normative references

20 [RFC2119] "Key words for use in RFCs to Indicate Requirement Levels",
21 <https://www.ietf.org/rfc/rfc2119.txt>

22 [Peppol_Policy4] "Peppol Policy for use of Identifiers v4.1.0",
23 <https://docs.peppol.eu/edelivery/policies/PEPPOL-EDN-Policy-for-use-of-identifiers-4.1.0-2020-03-11.pdf>
24

25 [SBDH] "Standard Business Document Header Technical Specification",
26 <https://www.gs1.org/standards/edi-xml-gdsn-gs1-uncefact-xml-profiles/sbdh-technical-specifications/1-3>
27

28 1.3 When to use the envelope

29 Unless other policies are decided for the Peppol infrastructure, the following principals describe when the
30 envelope is to be applied.

- 31 • Business Message Envelope MUST be applied for all messages exchanged with AS2
- 32 • Business Message Envelope MUST be applied for all messages exchanged with AS4

33 2 SBDH Usage

34 2.1 Party identifiers

35 The required Receiver party identifier in the Message Envelope header is the one that corresponds to a
36 Peppol Participant registered in the SML/SMP. Also, the Sender party identifier is required. The structure of
37 the identifier MUST follow the "Peppol Policy for use of Identifiers v4.x" [Peppol_Policy4].

38 In cases where the sender is not registered in SML/SMP the identifier of the sender MUST be used as if the
39 sender would be registered.

40 Non-normative example:

```
41 <Sender>  
42   <Identifier Authority="iso6523-actorid-upis">0088:7315458756324</Identifier>  
43 </Sender>  
44 <Receiver>  
45   <Identifier Authority="iso6523-actorid-upis">0088:4562458856624</Identifier>  
46 </Receiver>
```

47 2.2 XML considerations

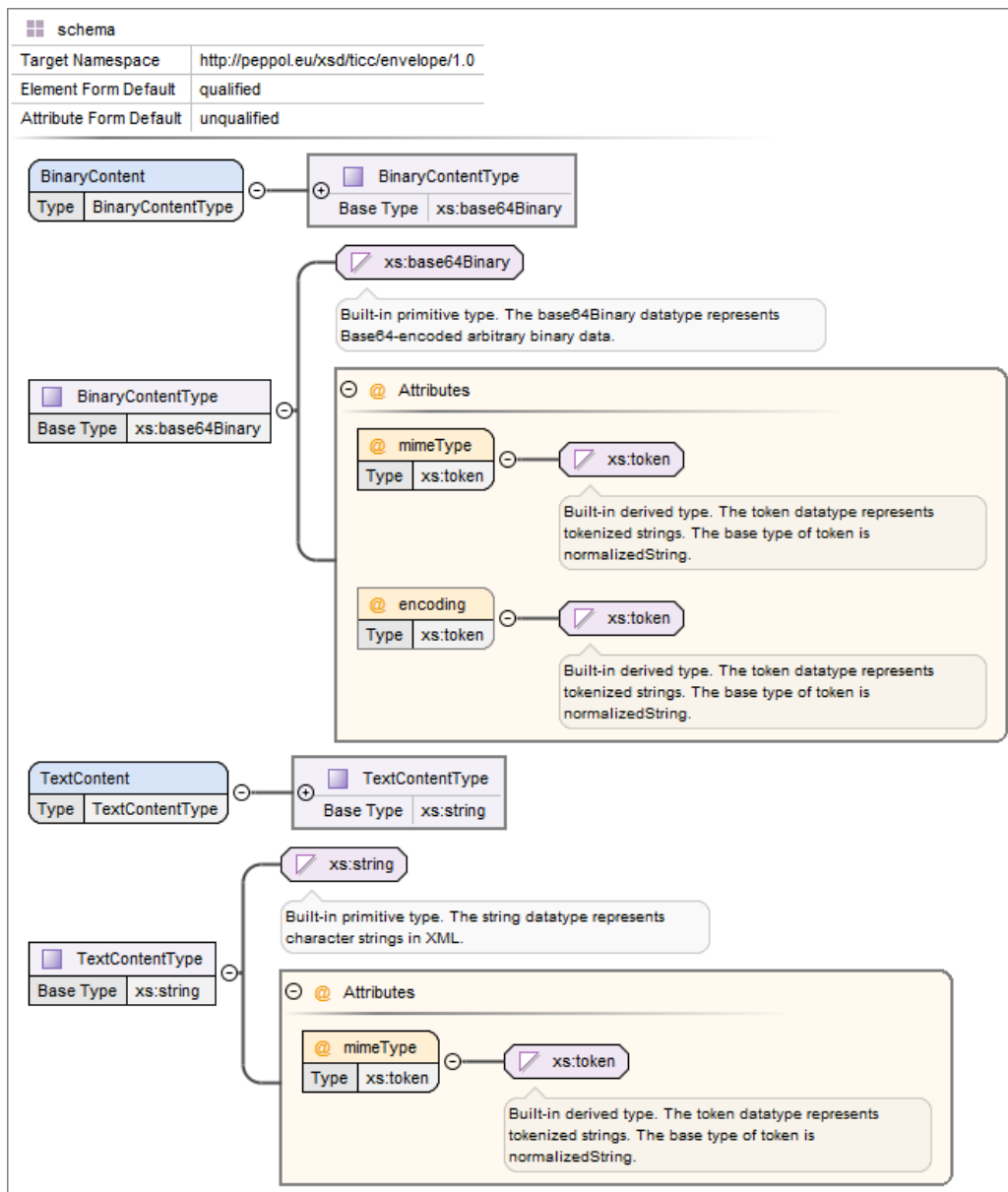
48 Since the envelope and included business document becomes one single XML instance, both the envelope
49 and the business document MUST have the same character encoding. The included business document
50 MUST be well-formed. The Message Envelope MUST NOT contain another Message Envelope.

51 **2.3 Non-XML Payloads**

52 Several processes that are supported in Peppol require the transportation of binary data and non-XML text
 53 as payload. In order for Peppol to support the transmission of non-XML payloads, an XML wrapper has
 54 been defined that MUST be used for wrapping these payloads.

55 The XML wrapper defined in this document MUST NOT be used to wrap another XML wrapper neither as
 56 binary nor as text payload.

57 The following picture depicts the XML schema of the XML wrapper (see chapter 3.2 for the full XML
 58 schema):



59

60 **2.3.1 Binary Payloads**

61 In order to support the transmission of binary payloads they should be transformed and packaged as
 62 follows:

- 63 1. The binary payload must be Base64-encoded
- 64 2. The encoded payload MUST be included inside the XML element **BinaryContent**. The XML
 65 namespace URI for this element MUST be <http://peppol.eu/xsd/ticc/envelope/1.0>.
- 66 3. The attribute **mimeType** MUST be set to the respective payload MIME type.

- 67 4. For text-based payloads, the optional `encoding` attribute MUST be used if the source encoding is
 68 different than the encoding of the surrounding XML document. At least the "UTF-8" encoding
 69 MUST be supported.

70 Non-normative example:

```

71 <?xml version="1.0" encoding="iso-8859-1"?>
72 <StandardBusinessDocument
73 xmlns="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader">
74   <StandardBusinessDocumentHeader>
75     ...
76   </StandardBusinessDocumentHeader>
77   <BinaryContent xmlns="http://peppol.eu/xsd/ticc/envelope/1.0"
78                 mimeType="application/vnd.etsi.asic-e+zip"
79                 encoding="UTF-8">
80     ABCD45678922 ...
81   </BinaryContent>
82 </StandardBusinessDocument>

```

83 2.3.2 Non-XML Text Payloads

84 For text data, there is no need of a container, as it can be placed directly as payload inside a `TextContent`
 85 XML element. The XML namespace URI for this element must be
 86 `http://peppol.eu/xsd/ticc/envelope/1.0`. The attribute `mimeType` MUST be set to the respective
 87 payload MIME type.

88 Note:

- 89 • If the text payload contains XML special characters (e.g. '<' or '>'), they MUST be escaped using
 90 XML encoding or alternatively the data needs to be wrapped inside a CDATA element so the XML
 91 remains well formed.
- 92 • If a text payload is embedded inside the `TextContent` element, it MUST use the same character
 93 encoding as the surrounding XML, otherwise the `BinaryContent` data element SHOULD be used.

94 Non-normative example:

```

95 <?xml version="1.0" encoding="iso-8859-1"?>
96 <StandardBusinessDocument
97 xmlns="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader">
98   <StandardBusinessDocumentHeader>
99     ...
100  </StandardBusinessDocumentHeader>
101  <TextContent xmlns="http://peppol.eu/xsd/ticc/envelope/1.0"
102              mimeType="Application/EDIFACT">
103  UNB+UNOA:2+9930711378399:14+7798032711116:14+160927:2252+EW861380947'UNH+186453437+CONTRL
104  :D:96A:UN:EAN002'UCI+F6GVY+7658032710006:14+9930711378111:14+8'UCM+3HHL0+ORDERS:D:96A:UN:
105  EAN008+7'UNT+4+186453437'UNZ+1+EW861380947'
106  </TextContent>
107 </StandardBusinessDocument>

```

108 2.4 Peppol Process ID and Document Type ID

109 The values of Process ID and Document Type ID are necessary in the SML/SMP discovery process to retrieve
 110 the relevant service metadata. Both values should be mapped to the element located at:

111 `StandardBusinessDocument/StandardBusinessDocumentHeader/BusinessScope/Scope/Inst`
 112 `anceIdentifier`

113 The respective identifier schemes are to be located in the following element (new in v1.1):

114 `StandardBusinessDocument/StandardBusinessDocumentHeader/BusinessScope/Scope/Iden`
 115 `tifier`

116 For backwards compatibility reasons (from version 1.1 to 1.0) – if the identifier schemes are missing – the
 117 default process scheme identifier `cenbii-procid-ubl` and the default document type identifier scheme
 118 `busdox-docid-qns` MUST be used.

119 The qualifier located at
 120 `/StandardBusinessDocument/StandardBusinessDocumentHeader/BusinessScope/Scope/Type`
 121 `e` is used to distinguish the meaning of the values by using codes: `DOCUMENTID` (for a document type
 122 identifier) and `PROCESSID` (for process identifiers).

123 Non-normative example without identifier schemes:

```
124 <BusinessScope>
125   <Scope>
126     <Type>DOCUMENTID</Type>
127     <InstanceIdentifier>urn:oasis:names:specification:ubl:schema:xsd:Invoice-
128 2::Invoice#urn:www.cenbii.eu:transaction:biitrns010:ver2.0:extended:urn:www.peppol.eu:bis:peppol4a:
129 ver2.0::2.1</InstanceIdentifier>
130   </Scope>
131   <Scope>
132     <Type>PROCESSID</Type>
133     <InstanceIdentifier>urn:www.cenbii.eu:profile:bii04:ver1.0</InstanceIdentifier>
134   </Scope>
135 </BusinessScope>
```

136 Non-normative example including identifier schemes (possible since v1.1 of this specification):

```
137 <BusinessScope>
138   <Scope>
139     <Type>DOCUMENTID</Type>
140     <InstanceIdentifier>urn:oasis:names:specification:ubl:schema:xsd:Invoice-
141 2::Invoice##urn:www.cenbii.eu:transaction:biitrns010:ver2.0:extended:urn:www.peppol.eu:bis:peppol4a:
142 ver2.0::2.1</InstanceIdentifier>
143     <Identifier>busdox-docid-qns</Identifier>
144   </Scope>
145   <Scope>
146     <Type>PROCESSID</Type>
147     <InstanceIdentifier>urn:www.cenbii.eu:profile:bii04:ver1.0</InstanceIdentifier>
148     <Identifier>cenbii-procid-ubl</Identifier>
149   </Scope>
150 </BusinessScope>
```

151 2.5 Additional attributes

152 Additional attributes MAY be provided that can be used to support the processing of the payload. These
 153 additional attributes are represented as key-value-pairs.

154 Each additional attribute is represented as a
 155 `/StandardBusinessDocument/StandardBusinessDocumentHeader/BusinessScope/Scope`
 156 element.

157 The attribute key must be contained in the child element `Type`. All attribute keys listed in chapter 2.5.1 are
 158 reserved and cannot be used as an additional attribute key. The attribute key MUST be unique within an
 159 SBDH. The attribute key MUST be handled case sensitive.

160 The attribute value must be contained in the child element `InstanceIdentifier`. The attribute value
 161 MAY be omitted.

162 Non-normative example with two additional attributes:

```
163 <BusinessScope>
164   <!-- Document type and process ID -->
165   <Scope>
166     <Type>TECHNICAL_VALIDATION_URL</Type>
167     <InstanceIdentifier>http://peppol.example.org/as4</InstanceIdentifier>
168   </Scope>
169   <Scope>
170     <Type>TECHNICAL_VALIDATION_REQUIRED</Type>
171     <InstanceIdentifier>>true</InstanceIdentifier>
172   </Scope>
173 </BusinessScope>
```

174 Non-normative example with one additional attribute that has no value:

175
176
177
178
179
180
181

```
<BusinessScope>
  <!-- Document type and process ID -->
  <Scope>
    <Type>IndicatorAttribute</Type>
    <InstanceIdentifier />
  </Scope>
</BusinessScope>
```

182 **2.5.1 Reserved attributes**

183 The following additional attribute keys are reserved for internal use in the Peppol network and MUST NOT
184 be used for other purposes than the intended ones.

Attribute key	Description
DOCUMENTID	Specifies the Peppol Document Type Identifier value (see chapter 2.3)
PROCESSID	Specifies the Peppol Process Identifier value (see chapter 2.3)
TECHNICAL_VALIDATION_URL	Reserved for potential future use.
TECHNICAL_VALIDATION_REQUIRED	Reserved for potential future use.

185 **2.6 Internet Media Type**

186 The MIME type or Content-Type for Peppol Message Envelope documents MUST be either
187 `application/xml` or `text/xml` (they can be used interchangeably¹).

188 **2.7 Message Envelope Schema**

189

¹ See <https://tools.ietf.org/html/rfc7303#section-9.2>

Element/Attribute	Annotation
StandardBusinessDocument	Type StandardBusinessDocument
└ xs:sequence	Occurrence 1 .. 1
└ StandardBusinessDocumentHeader	Occurrence 1 .. 1 Type StandardBusinessDocumentHeader
└ xs:sequence	Occurrence 1 .. 1
└ HeaderVersion	Occurrence 1 .. 1 Type xs:string Fixed 1.0 Description Always value 1.0
└ Sender	Occurrence 1 .. 1 Type Partner
└ xs:sequence	Occurrence 1 .. 1
└ Identifier	Occurrence 1 .. 1 Type PartnerIdentification Description Use the format XXXX:AAAAAAA where XXXX is the type of identifier (such as 0088 for GS1 GLN) and AAAAAAA the actual identifier.
└ Authority	Type xs:string Use required Description Use fixed value "iso6523-actorid-upis"
└ Receiver	Occurrence 1 .. 1 Type Partner
└ xs:sequence	Occurrence 1 .. 1
└ Identifier	Occurrence 1 .. 1 Type PartnerIdentification Description Use the format XXXX:AAAAAAA where XXXX is the type of identifier (such as 0088 for GS1 GLN) and AAAAAAA the actual identifier.
└ Authority	Type xs:string Use required Description Use fixed value "iso6523-actorid-upis"
└ DocumentIdentification	Occurrence 1 .. 1 Type DocumentIdentification
└ xs:sequence	Occurrence 1 .. 1
└ Standard	Occurrence 1 .. 1 Type xs:string Description The standard of the enveloped business message, normally described by use of the XML namespace of the business message root element (such as urn:oasis:names:specification:ubl:schema:xsd:Order-2)
└ TypeVersion	Occurrence 1 .. 1 Type xs:string Description The version number of the enveloped business message (such as the value "2.1" for OASIS UBL 2.1 or "2.0" for OASIS UBL 2.0)
└ Instanceldentifier	Occurrence 1 .. 1 Type xs:string Description An informative unique ID created by the issuer of the envelope. The Instanceldentifier MUST be unique for each Business Message Envelope being created. This ID is not the same as the ID of the business message (such as the Invoice Number). It is not the same as a transmission Message ID generated by the application sending the message (as defined in AS2 or AS4). The Instanceldentifier MUST be globally unique and it is RECOMMENDED to use UUID (such as 118e3040-51d2-11e3-8f96-0800200c9a66)
└ Type	Occurrence 1 .. 1 Type xs:string Description Message type - mandatory in SBDH. XML local element name of the root-element in the business message.

Element/Attribute	Annotation
└─ CreationDateAndTime	<p>Occurrence 1 .. 1</p> <p>Type xs:dateTime</p> <p>Description The date and time for when this envelope was created. It is NOT necessarily the same as the issue date of the business document (such as the invoice) being enveloped. It is NOT necessarily the date time for transmission.</p> <p>The format of the value of this MUST include timezone information.</p> <p>Use this format for UTC: 2014-01-17T09:30:00Z (Where the "Z" indicates UTC) Or specify offset from UTC by adding the time difference: 2014-01-17T09:30:00+02:00 (Where +02:00 indicates 2 hours positive offset to UTC)</p>
└─ BusinessScope	<p>Occurrence 1 .. 1</p> <p>Type BusinessScope</p> <p>Description Elements used to identify the ProcessID and DocumentID.</p>
└─ xs:sequence	<p>Occurrence 1 .. 1</p>
└─ Scope	<p>Occurrence 2 .. unbounded</p> <p>Type Scope</p> <p>Description Repeat at least twice - once for DocumentID once for ProcessID</p>
└─ xs:sequence	<p>Occurrence 1 .. 1</p>
└─ ScopeAttributes	<p>Occurrence 1 .. 1</p>
└─ xs:sequence	<p>Occurrence 1 .. 1</p>
└─ Type	<p>Occurrence 1 .. 1</p> <p>Type xs:string</p> <p>Description Qualifier of how to understand the InstanceIdentifier element. Codes.</p> <p>Applicable Codes DOCUMENTID PROCESSID</p>
└─ InstanceIdentifier	<p>Occurrence 1 .. 1</p> <p>Type xs:string</p> <p>Description The ProcessID (profile ID) or DocumentID corresponding to Peppol SMP for which the enveloped payload is intended to be used for. (the type of value is qualified by the ScopeAttributes/Type element)</p> <p>Description For senders - this value can be used to retrieve the correct set of Peppol service metadata.</p> <p>Description For receivers - this value can be used to verify that the receiving Peppol Participant has published support for this DocumentID or ProcessID.</p>
└─ Identifier	<p>Occurrence 0 .. 1</p> <p>Type xs:string</p> <p>Description Identification scheme used for the Document type identifier/Process identifier.</p> <p>Description Use value "busdox-docid-qns" for Document type identifier</p> <p>Description Identification scheme for Process identifier may differ depending on the Document type.</p>
└─ xs:any	<p>Occurrence 1 .. 1</p> <p>Description Business message goes here!</p>

190

191 **3 Appendix**



192 3.1 Example instance document (non-normative)

```

193 <?xml version="1.0" encoding="UTF-8"?>
194 <StandardBusinessDocument xmlns:xs="http://www.w3.org/2001/XMLSchema"
195 xmlns="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader">
196   <StandardBusinessDocumentHeader>
197     <HeaderVersion>1.0</HeaderVersion>
198     <Sender>
199       <Identifier Authority="iso6523-actorid-upis">0088:7315458756324</Identifier>
200     </Sender>
201     <Receiver>
202       <Identifier Authority="iso6523-actorid-upis">0088:4562458856624</Identifier>
203     </Receiver>
204     <DocumentIdentification>
205       <Standard>urn:oasis:names:specification:ubl:schema:xsd:Invoice-2</Standard>
206       <TypeVersion>2.1</TypeVersion>
207       <InstanceIdentifier>123123</InstanceIdentifier>
208       <Type>Invoice</Type>
209       <CreationDateAndTime>2019-02-01T15:42:10Z</CreationDateAndTime>
210     </DocumentIdentification>
211     <BusinessScope>
212       <Scope>
213         <Type>DOCUMENTID</Type>
214         <InstanceIdentifier>urn:oasis:names:specification:ubl:schema:xsd:Invoice-
215 2::Invoice##urn:cen.eu:en16931:2017#compliant#urn:fdc:peppol.eu:2017:poacc:billing:3.0::2.1</I
216 nstanceIdentifier>
217         <Identifier>busdox-docid-qns</Identifier>
218       </Scope>
219       <Scope>
220         <Type>PROCESSID</Type>
221         <InstanceIdentifier>urn:fdc:peppol.eu:2017:poacc:billing:01:1.0</InstanceIdentifier>
222         <Identifier>cenbii-procid-ubl</Identifier>
223       </Scope>
224     </BusinessScope>
225   </StandardBusinessDocumentHeader>
226   <Invoice xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
227 xmlns:cac="urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-2"
228 xmlns="urn:oasis:names:specification:ubl:schema:xsd:Invoice-2">
229     <!-- reduced instance file -->
230   </Invoice>
231 </StandardBusinessDocument>

```

232 3.2 Message Envelope Extension XML Schema

233 The normative version of the Message Envelope Extension XML Schema can be found at

234 <https://docs.peppol.eu/edelivery/>