Specification

OpenPEPPOL AISBL

Transport Infrastructure
Coordinating Community

ICT - Models

OpenPEPPOL Business
Message Envelope (SBDH)

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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   Introduction

The OpenPEPPOL 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 OpenPEPPOL 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

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

1.1   Terminology

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

For common terms used in these specifications, please see [BDEN-CDEF].

1.1.1 Notational conventions

For notational conventions, see [BDEN-CDEF].

1.1.2 Normative references

[BDEN-CDEF]   Business Document Exchange Network - Common Definitions, CommonDefinitions.pdf

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

[PEPPOL_Policy] PEPPOL Policy for the use of Identifiers,
https://github.com/OpenPEPPOL/documentation/blob/master/TransportInfrastructure/PEPPOL_Policy%20for%20use%20of%20identifiers-310.pdf

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

1.2 When to use the envelope

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

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

1.3 Party identifiers

The required Receiver party identifier in the Message Envelope header is the one that corresponds to a PEPPOL Participant registered in the SML/SMP. Also the Sender party identifier is required. The structure of the identifier MUST follow the "PEPPOL Policy for use of Identifiers" [PEPPOL_Policy].

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

Non-normative example:

```xml
<Sender>
  <Identifier Authority="iso6523-actorid-upis">0088:7315458756324</Identifier>
</Sender>
<Receiver>
  <Identifier Authority="iso6523-actorid-upis">0088:4562458856624</Identifier>
</Receiver>
```

1.4 XML considerations

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

1.5 PEPPOL Process ID and Document Type ID

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

```
StandardBusinessDocument/StandardBusinessDocumentHeader/BusinessScope/Scope/InstanceIdentifier
```

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

```
StandardBusinessDocument/StandardBusinessDocumentHeader/BusinessScope/Scope/Identifier
```

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

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

Non-normative example without identifier schemes:

```
<BusinessScope>
  <Scope>
    <Type>DOCUMENTID</Type>
    <InstanceIdentifier>urn:oasis:names:specification:ubl:schema:xsd:Invoice-
2::Invoice##urn:www.cenbii.eu:transaction:biitrns010:ver2.0:extended:urn:www.peppol.eu:bis:peppol4a:
ver2.0::2.1</InstanceIdentifier>
  </Scope>
  <Scope>
    <Type>PROCESSID</Type>
    <InstanceIdentifier>urn:www.cenbii.eu:profile:bii04:ver1.0</InstanceIdentifier>
  </Scope>
</BusinessScope>
```

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

```
<BusinessScope>
  <Scope>
    <Type>DOCUMENTID</Type>
    <InstanceIdentifier>urn:oasis:names:specification:ubl:schema:xsd:Invoice-
2::Invoice##urn:www.cenbii.eu:transaction:biitrns010:ver2.0:extended:urn:www.peppol.eu:bis:peppol4a:
ver2.0::2.1</InstanceIdentifier>
    <Identifier>busdox-docid-qns</Identifier>
  </Scope>
  <Scope>
    <Type>PROCESSID</Type>
    <InstanceIdentifier>urn:www.cenbii.eu:profile:bii04:ver1.0</InstanceIdentifier>
    <Identifier>cenbii-procid-ubl</Identifier>
  </Scope>
</BusinessScope>
```

1.6   Additional attributes

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

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

The attribute key must be contained in the child element `Type`. All attribute keys listed in chapter 1.6.1 are reserved and cannot be used as an additional attribute key. The attribute key MUST be unique within an SBDH.

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

Non-normative example with two additional attributes:

```
<BusinessScope>
  <!-- Document type and process ID -->
  <Scope>
    <Type>TECHNICAL_VALIDATION_URL</Type>
    <InstanceIdentifier>http://peppol.example.org/as4</InstanceIdentifier>
  </Scope>
  <Scope>
    <Type>TECHNICAL_VALIDATION_REQUIRED</Type>
    <InstanceIdentifier>true</InstanceIdentifier>
  </Scope>
```

```
</BusinessScope>
```

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

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

1.6.1 Reserved attributes

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

Attribute key	Description
DOCUMENTID	Specifies the PEPPOL Document Type Identifier value (see chapter 1.5)
PROCESSID	Specifies the PEPPOL Process Identifier value (see chapter 1.5)
TECHNICAL_VALIDATION_URL	Reserved for potential future use.
TECHNICAL_VALIDATION_REQUIRED	Reserved for potential future use.

1.7   Message Envelope Schema

Element/Attribute	Annotation	
StandardBusinessDocument	Type	StandardBusinessDocument
└ xs:sequence	Occurence	1 .. 1
StandardBusinessDocumentHeader	Occurence	1 .. 1
	Type	StandardBusinessDocumentHeader
└ xs:sequence	Occurence	1 .. 1
─ **HeaderVersion**	Occurence	1 .. 1
	Type	xs:string
	Fixed	1.0
	Description	**Always value 1.0**
─ **Sender**	Occurence	1 .. 1
	Type	Partner
└ xs:sequence	Occurence	1 .. 1
─ **Identifier**	Occurence	1 .. 1
	Type	PartnerIdentification
	Description	**Use the format XXXX:AAAAAAAA where XXXX is the type of identifer (such as 0088 for GS1 GLN) and AAAAAAAA the actual identifier.**
└ *Authority*	Type	xs:string
	Use	required
	Description	**Use fixed value "iso6523-actorid-upis"**
─ **Receiver**	Occurence	1 .. 1
	Type	Partner
└ xs:sequence	Occurence	1 .. 1
─ **Identifier**	Occurence	1 .. 1
	Type	PartnerIdentification
	Description	**Use the format XXXX:AAAAAAAA where XXXX is the type of identifer (such as 0088 for GS1 GLN) and AAAAAAAA the actual identifier.**
└ *Authority*	Type	xs:string
	Use	required
	Description	**Use fixed value "iso6523-actorid-upis"**
─ **DocumentIdentification**	Occurence	1 .. 1
	Type	DocumentIdentification
└ xs:sequence	Occurence	1 .. 1
─ **Standard**	Occurence	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**	Occurence	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)**
─ **InstanceIdentifier**	Occurence	1 .. 1
	Type	xs:string
	Description	**An informative unique ID created by the issuer of the envelope. The InstanceIdentifier 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 START).** **The InstanceIdentifier MUST be globally unique and it is RECOMMENDED to use UUID (such as 118e3040-51d2-11e3-8f96-0800200c9a66)**
─ **Type**	Occurence	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**	Occurence	1 .. 1
	Type	xs:dateTime
	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.**
		The format of the value of this MUST include timezone information.
		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)**
└ **BusinessScope**	Occurence	1 .. 1
	Type	BusinessScope
	Description	**Elements used to identify the ProcessID and DocumentID.**
└ xs:sequence	Occurence	1 .. 1
└ **Scope**	Occurence	2 .. unbounded
	Type	Scope
	Description	**Repeat at least twice - once for DocumentID once for ProcessID**
└ xs:sequence	Occurence	1 .. 1
└ ScopeAttributes	Occurence	1 .. 1
└ xs:sequence	Occurence	1 .. 1
└ **Type**	Occurence	1 .. 1
	Type	xs:string
	Description	**Qualifier of how to understand the InstanceIdentifier element. Codes.**
	Applicable Codes	
	DOCUMENTID	
	PROCESSID	
└ **InstanceIdentifier**	Occurence	1 .. 1
	Type	xs:string
	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)**
	Description	**For senders - this value can be used to retrieve the correct set of PEPPOL service metadata.**
	Description	**For receivers - this value can be used to verify that the receiving PEPPOL Participant has published support for this DocumentID or ProcessID.**
└ **Identifier**	Occurence	0 .. 1
	Type	xs:string
	Description	**Identification scheme used for the Document type identifier/Process identifier.**
	Description	**Use value "busdox-docid-qns" for Document type identifier**
	Description	**Identification scheme for Process identifier may differ depending on the Document type.**
└ **xs:any**	Occurence	1 .. 1
	Description	**Business message goes here!**

1.8 Sample instance document (non-normative)

```xml
<?xml version="1.0" encoding="UTF-8"?>
<StandardBusinessDocument xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader">
  <StandardBusinessDocumentHeader>
    <HeaderVersion>1.0</HeaderVersion>
    <Sender>
      <Identifier Authority="iso6523-actorid-upis">0088:7315458756324</Identifier>
    </Sender>
    <Receiver>
      <Identifier Authority="iso6523-actorid-upis">0088:4562458856624</Identifier>
    </Receiver>
    <DocumentIdentification>
      <Standard>urn:oasis:names:specification:ubl:schema:xsd:Invoice-2</Standard>
      <TypeVersion>2.1</TypeVersion>
      <InstanceIdentifier>123123</InstanceIdentifier>
      <Type>Invoice</Type>
      <CreationDateAndTime>2013-02-19T05:10:10Z</CreationDateAndTime>
    </DocumentIdentification>
    <BusinessScope>
      <Scope>
        <Type>DOCUMENTID</Type>
        <InstanceIdentifier>urn:oasis:names:specification:ubl:schema:xsd:Invoice-2::Invoice##
urn:www.cenbii.eu:transaction:biitrns010:ver2.0:extended:urn:www.peppol.eu:bis:peppol4a:ver2.0
::2.1</InstanceIdentifier>
        <Identifier>busdox-docid-qns</Identifier>
      </Scope>
      <Scope>
        <Type>PROCESSID</Type>
        <InstanceIdentifier>urn:www.cenbii.eu:profile:bii04:ver1.0</InstanceIdentifier>
        <Identifier>cenbii-procid-ubl</Identifier>
      </Scope>
    </BusinessScope>
  </StandardBusinessDocumentHeader>
  <Invoice xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
xmlns:cac="urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-2"
xmlns="urn:oasis:names:specification:ubl:schema:xsd:Invoice-2">
    <!-- reduced instance file -->
  </Invoice>
</StandardBusinessDocument>
```