



IT- og Telestyrelsen

Ministeriet for Videnskab
Teknologi og Udvikling

OIOUBL Guideline

UBL 2.0 Signature

OIOUBL Signatur

Version 1.1



This release is protected by Creative Commons License, Naming 2.5 

Colophon

Contact:

Danish National IT and Telecom Agency

E-mail: oioubl@itst.dk

OIOUBL Version 2.01

April 2007

Ministry of Science, Technology and Innovation
National IT and Telecom Agency

Data Standardization Office
Holsteinsgade 63
DK-2100 Copenhagen Ø
Phone +45 3545 0000
Fax +45 3545 0010
<http://www.itst.dk>
itst@itst.dk

Copyrights for this release in accordance with Creative Common, Naming 2.5: 

Permission is granted to:

- *produce processed works based on this document*
- *reproduce and make the document available to the public*
- *use the document for commercial purposes*
provided that the Danish National IT & Telecom Agency be clearly referenced as the source of this release.

Further information about these rights is available at
<http://creativecommons.org/licenses/by/2.5/deed.da>.

Contents

1. Preface.....	4
1.1 Purpose of this document	4
2. Relevant UBL classes.....	5
3. Description.....	6
3.1 What is a UBL digital signature?.....	6
3.2 Specifying who signed.....	6
3.3 Specifying the Validator.....	6
3.4 Specifying a signature.....	7
3.5 In which documents should digital signature be used?.....	8
4. Relevant code lists.....	9
5. Terms and abbreviations.....	10

1. Preface

This guideline is one out of a series of documents describing the purpose and use of the business documents that comprise the Danish localization of UBL 2.0, known as OIOUBL.

For each business document, a guideline document has been prepared, as well as general guidelines describing the use of elements that apply across the documents.

The target audience of this document is technicians or business professional involved in making e-business work in practice.

1.1 Purpose of this document

The purpose of this document is to explain the use of signatures in OIOUBL.

2. Relevant UBL classes

Signature can be used at header level in all UBL documents. Furthermore, it is used in the following UBL classes:

- Endorsement
- CertificateOfOriginApplication

None of these classes are used in OIOUBL. Signatures must be detached if they are included in the document.

3. Description

This chapter describes the UBL signature and its usage in OIOUBL.

3.1 What is a UBL digital signature?

The UBL Signature describes the digital signatures applied to a document. A signature should not be mistaken for a signature used for securing the transport, or with a XMLDSIG signature. A signature is used in a document when the business-related processing of the document requires it. An UBL signature does not warrant the sincerity of a document better than a hand written signature in a paper document. In the end, external conditions, such as secure networks and confidence in your service providers, will have to secure the sincerity. Just like the Contract class refers to a signed contract, the Signature is used to refer to the signatures that are attached to the document.

3.2 Specifying who signed

It may be referenced by use of an *ID* on the signature, and a description (such as the company name) of the *Party* who signed the document. This is shown in the following example:

```
<cac:Signature >
  <cbc:ID>Peter.Hansen@oioubl.dk</cbc:ID>
  <cac:SignatoryParty>
    <cac:PartyName>
      <cbc:Name>OIO fælleskøb A/S</cbc:Name>
    </cac:PartyName>
    <cac:Person>
      <cbc:FirstName>Peter</cbc:FirstName>
      <cbc:FamilyName>Hansen</cbc:FamilyName>
      <cbc:Title>Indkøbschef</cbc:Title>
    </cac:Person>
  </cac:SignatoryParty>
</cac:Signature>
```

Such a signature may be used in the receiver's business flow. A supplier may, for example, be required to have specific signatures included in an order for him to process it, when it exceeds a specific amount, or for specific item groups. The supplier must trust that the Customer's system secures that the signature originates from the correct person.

3.3 Specifying the Validator

If the document may arrive to the supplier from different sources, it may be of use to specify which system validated the signature, and when this was done. This is done by use of the *ValidatorID*, and the *ValidationDate* and *ValidationTime*.

```
<cac:Signature >
  <cbc:ID>Peter.Hansen@oioubl.dk</cbc:ID>
  <cbc:ValidationDate>2006-09-13</cbc:ValidationDate>
  <cbc:ValidationTime>14:20:02</cbc:ValidationTime>
  <cbc:ValidatorID>DoorTrade.net/signout</cbc:ValidatorID>
  <cac:SignatoryParty>
    <cac:PartyName>
      <cbc:Name>OIO fælleskøb A/S</cbc:Name>
    </cac:PartyName>
    <cac:Person>
      <cbc:FirstName>Peter</cbc:FirstName>
      <cbc:FamilyName>Hansen</cbc:FamilyName>
      <cbc:Title>Indkøbschef</cbc:Title>
    </cac:Person>
  </cac:SignatoryParty>
</cac:Signature>
```


In the example it is the XMLDSIG signature (See <http://www.w3.org/TR/2002/REC-xmlsig-core-20020212/Overview.html>) attached as a MIME attachment (Base64 encoded xml), whilst the original document is linked via a URI. *CanonicalizationMethod* and *SignatorMethod* can be used to check the signatory against the original document.

If the transformation method is valid and trusted by all parties, the original document may instead be represented by a list of paths (*XPath*) from the document that was the source of the one seen by the signatory. Further details on this are available in OIOUBL_GUIDE_DOKUMENTREF (Ref. G21).

3.5 In which documents should digital signature be used?

The specific requirements for the use of digital signatures should be agreed mutually. One example could be that the Customer purchases via a Procurement solution, and therefore does not directly control who purchases what. In such case the Order will be attached a digital signature.

4. Relevant code lists

Code list:	Agency:	Urn:	Example value:
PartyIdentification/ID	320	urn:oiubl:scheme:partyidentificationid-1.1	CVR number or the like.
PartyLegalEntity/CompanyID	320	urn:oiubl:scheme:partylegalentitycompanyid-1.1	CVR or CPR number

5. Terms and abbreviations

Listed below are the most important terms and abbreviations:

Term:	Explanation:
Header level	Fields on header level are all the fields that are found directly under the root element (the top element) in the XML structure. Fields on header level apply to the whole document.
Line level	Fields at line level, contrary to field at header level, only apply to the specific document line
Class	A class is a collection of fields. For example, the Price class contains fields such as PriceAmount, BaseQuantity, etc.
Fields	A field is an element in the XML structure. For example, the PriceAmount is the field containing the price in an invoice line.