



# Guideline



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# PEPPOL Post Award eProcurement ICT - Models

# Implementation Guideline for BIS 3a – Basic Order only



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**Editors:** 

**Bergthor Skulason (NITA)** 



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# **Revision History**

Revision	Date	Author	Organisation	Description
1.0	30.11.2011	Bergthor Skulason	NITA	1 <sup>st</sup> version, separate content from BIS
1.1	15.01.2012	Bergthor Skulason	NITA	Clarification of examples
1.2	01.05.2012	Bergthor Skulason	NITA	Textual corrections

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# **Contributors**

# **Organisations**

DIFI (Direktoratet for forvaltning og IKT)<sup>1</sup>, Norway, http://www.difi.no NITA (IT- og Telestyrelsen)<sup>2</sup>, Denmark, http://www.itst.dk PEPPOL.AT/BBG (Bundesbeschaffung), Austria, http://www.bbg.gv.at/PEPPOL.AT/BRZ (Bundesrechenzentrum)<sup>3</sup>, Austria, http://www.brz.gv.at/

#### **Persons**

Bergthor Skulason, NITA (editor) Andrea Leutgeb, PEPPOL.AT/BBG Georg Birgisson, NITA/Eykur Klaus V. Pedersen, DIFI Oriol Bausá, NITA/Invinet Philip Helger, PEPPOL.AT/BRZ

<sup>&</sup>lt;sup>2</sup> English: National IT- and Telecom Agency <sup>3</sup> English: Austrian Federal Computing Centre



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<sup>&</sup>lt;sup>1</sup> English: Agency for Public Management and eGovernment



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# Introduction

This Guideline is a result of work within PEPPOL project and is published as material to support PEPPOL BIS specifications.

#### 1.1 Audience

The audience for this document is organizations wishing to be PEPPOL enabled for exchange of electronic orders, and/or their ICT-suppliers. These organizations may be:

- Service providers
- Contracting Authorities
- Economic Operators
- Software Developers

More specifically it is addressed towards the following roles:

- ICT Architects
- ICT Developers
- Business Experts

# 1.2 The PEPPOL BIS - short overview

The PEPPOL BIS (**B**usiness **I**nteroperability **S**pecification) provides a set of specifications for implementing PEPPOL business documents. The specifications enable any company to issue electronic documents that fulfil legal and business processing requirement within the European Union and the EEA<sup>4</sup>. It specifies a subset of information that is used by most industries and enables users to issue documents (invoices, orders, etc...) that are valid for trade within the European Union and the EEA, supporting requirements for regional, national and cross border trade.

# 1.3 PEPPOL Interoperability, conformance and testing support

Participants within the PEPPOL community must claim conformance to be able to participate in document exchange. The conformance requirements imply that:

- issuing applications must issue documents that do not violate the BIS rule set
- receiving applications must be able to process/understand all content.

Conformance is therefore expressed as a requirement on the software solution implementing the BIS and measured against document instances. Participants in the PEPPOL network register capabilities to receive documents while issuers of documents do not register capabilities.

Conformance is measured against a specific PEPPOL BIS and is measured against three key aspects:

- Choreography; compliance is measured against the sequence of collaborations and transactions in the BIS.
  - Every software solution claiming compliance to a profile is expected to be able to support all business collaborations and business transactions defined by the BIS.
- Data content; compliance is measured against the "core" transaction data model in the BIS. Every software solution claiming conformance to a BIS is expected to be able to process and understand all elements defined as part of the relevant core transaction data models referenced by the BIS. The requirement implies that the receiving applications must be able to process/understand all content, while issuing applications must issue documents that do not violate the BIS rule set.
- Business rules; conformance is measured against the rules stated at collaboration and transaction level of the BIS.
  - Every software solution claiming conformance to a BIS is expected to adhere to all business rules stated within the BIS description and the referenced transaction data model.

PEPPOL provides support for testing of conformance with a test site that provides:

Testing guidelines

<sup>&</sup>lt;sup>4</sup> EEA is the European Economic Area. Current members are Iceland, Liechtenstein and Norway.





- Validation web site for uploading of document instances for validation of content.
- Examples of documents, and test cases
- Documentation of testing results

More information on testing support can be found at [PEPPOL\_PostAward].

# 1.4 PEPPOL Implementation support

This PEPPOL BIS is bound to UBL 2.0 syntax. PEPPOL provides as implementation support a set of tools and specifications. These include:

- Specifications of PEPPOL BIS 3a Basic Order Only.
- Implementation guideline (this document).
- Business rules and code lists.
- Schematron components for validation of business rules that apply to content.
- > Stylesheet for presentation of Core data elements.
- An HTML presentation of the CEN BII data model for browsing.
- Validation web site
- Example documents and test cases

Information on implementation support can be found at PEPPOL Post Award support page, see [PEPPOL\_PostAward].

PEPPOL has set up the PEPPOL Enterprise Interoperability Architecture (EIA) – that presents the PEPPOL artefacts in a repository. The EIA repository is a three dimensional matrix for organizing results of the project. The PEPPOL EIA is a 3 dimensional cube you can navigate by clicking a one of the blue cell in the frame. For more information about the PEPPOL EIA, see [PEPPOL\_EIA].

The latest version of this document can be found in: Post Award eProcurement / ICT Architecture / Models.

# 1.4.1 BIS 3a - Basic Order Only - Specifications

The specifications of PEPPOL BIS 3a – Basic Order Only provides:

- Order data model
- Order business rules
- Order identifiers
- Order code lists

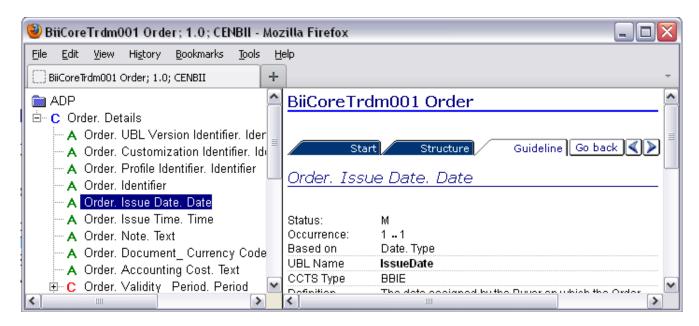
The BIS 3a data model is based on TRDM001 from CEN BII. The data model is documented in the BIS3a specifications. Information about this data model can also be viewed on the CEN BII web site see [CEN\_BII]

- In HTML browsable format
- In MS-Excel table format

See [PEPPOL\_PostAward] for more information.







# 1.4.2 BIS 3a - Basic Order Only, Business Rules

PEPPOL has stated a set of abstract rules in order to facilitate interoperability in cross border trade as well as compliance to EU legal directives. The rules are grouped into sections depending on their scope and origin. To support the implementation of The PEPPOL specifications, the business rules are supported by:

- The rule set, see BIS 3a specifications
- Schematron implementation, as example implementation of the rules.
- Validation web site, where implementers can test documents for conformance

Implementers can validate their example documents at the PEPPOL document validation service, see [PEPPOL\_PostAward] for more information.







#### 1.5 References

[PEPPOL] <a href="http://www.peppol.eu/">http://www.peppol.eu/</a>

[PEPPOL\_EIA] http://www.peppol.eu/peppol\_components/peppol-eia/eia

[PEPPOL\_PostAward] http://www.peppol.eu/peppol\_components/peppol-eia/eia#ict-architecture/post-award-

eprocurement/models

[PEPPOL\_Transp] http://www.peppol.eu/peppol\_components/peppol-eia/eia#ict-architecture/transport-

infrastructure/models

[CEN\_BII] <u>www.cen.eu/cwa/bii/specs</u> [CEN\_BII2] <u>http://www.cenbii.eu</u>

[BII\_Order] http://www.cen.eu/cwa/bii/specs/ProfileS/ProfileDoc/BII profile 03 - Order only v1.pdf

[BII\_OrderModel] An browsable HTML version:

http://www.cen.eu/cwa/bii/specs/Profiles/Data/html/CoreTrnsDm/BiiCoreTrdm001 Order;

1.0; CENBII/D1.htm and MS-Excel version:

http://www.cen.eu/cwa/bii/specs/Profiles/Data/TrnsDm/CoreTrnsDm/BiiCoreTrdm001

Order; 1.0; CENBII.xls

[UBL] http://docs.oasis-open.org/ubl/os-UBL-2.0/UBL-2.0.html

[Schematron] <a href="http://www.schematron.com">http://www.schematron.com</a> <a href="http://www.w3.org/TR/xslt20/">http://www.w3.org/TR/xslt20/</a>





# 2 Order implementation guide

Based on CEN BII results, a syntax binding of this PEPPOL BIS the UBL 2.0 syntax is available to implementers. All document instances conformant to this PEPPOL BIS must be:

- Capable of validation against the relevant UBL 2.0 Schema, see [UBL].
- Conform to all business rules in this PEPPOL BIS

Examples of PEPPOL orders and the Stylesheet used in this example are available for implementers, see [PEPPOL\_PostAward] for more information.

## 2.1 PEPPOL business rules

A PEPPOL BIS is a statement of capabilities and can be viewed as an agreement. A business rule expresses a requirement and places a restriction on the content. The PEPPOL rule set is a set of rules that clarify the content by stating mandatory fields, content rules like code lists, calculation rules and dependency rules for individual fields.

- A document that does not break any of the rules is considered conformant to a BIS.
- Issuer of a PEPPOL document that produces messages that do not contradict any of these rules can be certain that anyone claiming conformance to PEPPOL can receive and process the messages.
- A receiver can register capabilities to receive documents and thereby state capabilities to process documents that follow stated rules of the BIS.
- A receiver should accept and process all conformant documents (that do not break any rules).

# 2.1.1 Mandatory elements, business rules and code lists

Information about mandatory elements, business rules and code lists is contained in the BIS specification document. Further information can be found at [PEPPOL\_PostAward].

#### 2.1.2 Use of decimals

The following rules apply to use of decimals:

- Currency amounts are stated with maximum 2 decimals rounded as necessary.
  - This applies to all amounts on header and line level except unit prices.
- VAT rates are stated as percentages with maximum 2 decimals.
  - E.g. twenty one and one third percent is stated as 21.33
- Quantity is stated with maximum 3 decimals.
- Unit prices are stated with maximum of 4 decimals.

The goal of these rules is to support implementers in harmonizing expectation towards receivers of documents, what can the sender of a document expect the receiver to understand and process of the information content without any previous bi-lateral agreements. The challenge is therefore on senders to present information in reasonable way to fit within these expectations.

# 2.1.3 On identifiers

#### Party and endpoint identifiers

In PEPPOL, parties MUST be identified according to "PEPPOL Policy for the use of Identifiers". This policy applies to use of Partyldentification and Endpoint ID fields. The policy states that the schemeID attribute is mandatory for PartyID end EndpointID. A normative form of the PartyID code list is available as a Genericode file, see PEPPOL BIS [PEPPOL\_PostAward] and [PEPPOL\_Transp] for more information.

- Party Identifiers MUST follow the PEPPOL Policy on the use of Identifiers
- Endpoint Identifiers MUST follow the PEPPOL Policy on the use of Identifiers

Role of the PartyID field is to provide information about the trading partners.

Role of the EndpointID field is to identify the end point (receiving application) and bridges a gap between the transport and the application. It is recommended that PEPPOL Access Points do not base their routing on these information fields.





#### **Address identifiers**

Address information can be given by using an identifier. The identifier scheme itself is specified in the attributes of the element:

- Postal address identifiers SHOULD be GLN.
- Country codes MUST be coded using ISO code list 3166-1
- For cross border trade country codes MUST be provided for buyer and seller.

PEPPOL expects issuers of documents to provide minimum address information for parties even if address identifiers are used. This will enable receivers of documents to process them even if they do not have access to the relevant databases otherwise needed for processing and thereby enabling the issuer the reach every participant registered within PEPPOL, without previous bi-lateral setup. Therefore - according to PEPPOL – all documents should at minimum contain the customer and suppliers name and address detail as follows:

- street name and building number
- city name
- zip code
- country code

#### **Location Identifiers**

Location identifiers SHOULD be GLN

# 2.2 Example XML Implementation walkthrough

Order Order nr. ORD108 Issue Date Payable Amount Customer Party: 01.10.2011 2.399.08 IT og Telestyrelesen Main Street 1, Po.Box: Box 5467 Suite 123 Issue Time: 12:00:00 Order Currency: EUR Revenue Department (GLN 456456-1386) 2100 Copenhagen, Österport, DK Legal Comp.ID: DK123123123 Order.Note: Ordering Office supplies VATor.: DK123 AccountingCostCode: Project 123 Seller / Supplier Party: Buyer Party ID: 123123123 ValidityPeriod: 01.12.2011 The Office Supplier Ouotation Document Reference: PEPPOL quote-123 main street 987 8, Po.Box: 123 Back door OrderDocumentReference: Order 007 Sales department (GLN DK987987987) Originator Document Reference: Project plan PA-12001 600 Copenhagen, Österport, DK Contract: Framework agreement Contract 123 Legal Comp.ID: DK987987987 LineID Item.ID. SellerID Quantity UOM. Unit Price\* Partial Deliv? LineAmount Amount+VAT 1. JB007 Portable PC computer 1.499,00 1.499,00 1.873,75 1,00 Pcs 2. JB008 "Advanced computing" manual 23,90 23,90 23,90 1,00 Pcs No 2,00 3. JB009 "Computing for dummies" book 32,00 Not present 64,00 64,00 Pcs 89.50 4. JB010 Portable drive, 500Mb 1,00 Pcs Νn 89,50 100,24 5. JB011 Net Cable 250,00 0,87 213,75 267,19 No \*Price Amount is excluding VAT. LineExtensionAmount: 1.890,15 No.of lines: 5 100,00 Charges: Allowance: 30.00

Figure 1 PEPPOL Order visualization – summary information

TaxAmount:

PayableAmount:

438,93

2.399,08





The following section uses a sample PEPPOL BIS 3a stylesheet to demonstrate the use of the information contained in a PEPPOL Order. The first section (Figure 1 on page 10) shows the more general information of an order in a simple layout. The second section (Figure 2 on page 11) displays additional information, such as item details. It should be kept in mind that the XML is the original document and represents the full order, even though the visualization display is split into two parts.

In these diagrams each displayed section has been annotated to include labels for the displayed sections (e.g. H01 labels the overall order information). These labels are useful when reading the subsequent sections describing the XML elements used.

Delivery information:

Name: IT og Telestyrelsen, inventory DeliveryPartyID: DK87654321

Holsteinsgade 63

Back door

basement (GLN 456654456)

2100 Copenhagen, Österport, DK DeliveryTerms.Location: GLN 6754238987000

RequestedDeliveryPeriod.: 01.10.2011 - 01.12.2011 DeliveryTerms: FOB - Buyer will pay transport cost DeliveryParty.ContactName: Anders F. R.

Tel: 4621280 Fax: 4621281 Email: afr@itst.dk

#### Additional buyer information:

#### BuyerPerson:

John X Smith Purchasing manager E-mail: john@itst.dk Sími: 5121230 Fax: 5121231

#### PartyLegalEntity:

IT og Telestyrelesen Copenhagen, Österport, DK PostalAdressID:

456456-1386 EndpointID: DK123123123 CustomerPartyID:

#### SupplierDeliveryContact:

Andy Johnsons Sími: 5121245 Sími: 5121246 andy@itst.dk

#### Additional seller information:

#### SunnlierPerson:

Antonio M. Johannson Sales Manager

E-mail: antonio@salescompany.dk

Sími: 4621230 Fax: 4621231 PartyLegalEntity: The Office Supplier

Copenhagen, Österport, DK PostalAdressID:

DK987987987

EndpointID: 1xxx8987987 SupplierPartyID:

987987987

#### OriginatorCustomerParty:

#### OriginatorPerson:

Christian X Rasmussen Project leader PEPPOL

E-mail: cxr@itst.dk Sími: 4621270 Fax: 4621271 OriginatorPartyID: 403403403403

# Additional Line information:

SelleritemID	StandarditemiD	AccountingCostID	OriginatorParty	DeliveryPeriod
1. JB007	1234567890121	Project-X123	John Doe 369369369	01.10.2011 - 01.12.2011
<b>Description:</b> AMD Proc	essor, 14" Display, 4GB M	emory, 320GB Hard Drive		
Color - Pink DiskDrive - 320gb ScreenSize - 14" RAM - 4gb				
<b>Note:</b> The coolest PC o	n the market			
2. JB008	1234567890122	Project ID- 10101	No one ASI-1337	01.10.2011 - 01.12.2011
3. JB009	1234567890123	Project ID- 10101	No one ASI-1337	01.10.2011 - 01.12.2011
4. JB010	1234567890124	Project ID- 123	No one ASI-1337	01.10.2011 - 01.12.2011
Note: package separat	ely from rest of items			
5. JB011	1234567890125	Project ID- 123	No one ASI-1337	01.10.2011 - 01.12.2011
Note: Minimum 250 me	eters			

#### Attachment:

ID.	Туре	URI
P1.	Conference broucher	http://www.itst.dk/ordering.html
Doc2.	Drawing	

Figure 2 PEPPOL Order visualization – detail information





#### 2.3 General Order information

A valid XML instance conformant to this BIS is identified by the following XML fragment.

#### Note:

- Process identifier in the document instance MUST correspond to the SMP process identifier.
- An order transaction T01 MUST only be used in BIS 3 or 6

The upper right corner on the visualized Order shows the word "Order". This word can be fixed but may also be processed from the document type code.

The first tag in the XML states that the document is an Order.

```
<Order xmlns ...</pre>
```

The mandatory order number is drawn from the following tag.

```
<cbc:ID>ORD108</cbc:ID>
```

## 2.3.1 On Currencies

The currency of the order is stated in the following tag. For interoperability PEPPOL (and BII) orders are single currency orders so the currency stated here applies to all amounts that are part of the summation of the order.

<cbc:DocumentCurrencyCode listID="ISO 4217 Alpha" listAgencyID="6">EUR</cbc:DocumentCurrencyCode>

- DocumentCurrencyCode and currencyID MUST be coded using ISO code list 4217
- An order MUST have a currency code for the document.
- Currency Identifier MUST be stated in the currency stated on header level.

Note, that more than one currency can be stated in a document (extended information) but the receiver cannot be expected to handle these without a prior agreement.

#### 2.3.2 Order dates

An order MUST contain issue date. That date is specified in the following way (time information is optional).

```
<cbc:IssueDate>2011-10-01<cbc:IssueTime>12:00:00
```

Order validity period is used to state the period the order is valid. The seller is expected to respond before the given date.

```
<cac:ValidityPeriod>
     <cbc:EndDate>2011-12-01</cbc:EndDate>
     </cac:ValidityPeriod>
```

## 2.4 Buyer

This part of the order contains information about the buyer who is the issuer of the order. The buyer is described using the BuyerCustomerParty tags.





#### **Buyer Name**

An order MUST contain the full name of the customer. The name is stated using the following tag.

```
<cac:PartyName>
     <cbc:Name>IT og Telestyrelesen</cbc:Name>
     </cac:PartyName>
```

#### **Address**

The buyer address can be defined in various ways depending on regions and requirements. The PEPPOL/BII specification of an address is intended to support most common requirements. The following elements can be used to display an address in the following conventional way.

Display	Mapping to elements		
Revenue department	Department		
Main street 1	StreetName BuildingNumber		
Suite 123	AdditionalStreetName		
Post box 5467	Postbox		
Copenhagen, Österport, 2100	CityName, CountrySubentity, PostalZone		
DK	CountryIdentificationCode		

This example can then be expressed using the following elements.

<cac:postaladdress></cac:postaladdress>	
<pre><cbc:postbox>5467</cbc:postbox></pre>	
<pre><cbc:streetname>Main street</cbc:streetname></pre>	
<pre><cbc:buildingnumber>1</cbc:buildingnumber></pre>	
<pre><cbc:additionalstreetname>Suite 123</cbc:additionalstreetname></pre>	
<pre><cbc:department>Revenue department</cbc:department></pre>	
<pre><cbc:cityname>Copenhagen</cbc:cityname></pre>	
<pre><cbc:postalzone>2100</cbc:postalzone></pre>	
<pre><cbc:countrysubentity>Österport</cbc:countrysubentity></pre>	
<cac:country></cac:country>	
<pre><cbc:identificationcode listagencyid="6" listid="ISO3166-1">DK</cbc:identificationcode></pre>	ntificationCode>

In many cases the building number is stored as part of the street name, in which case the building number element is not used.

#### **Party Identifiers**

Role of the PartyID is to identify the Buyer. It can assist the receiver in automatically processing of orders and routing internally. Role of the EndpointID is to support document transport to receiver location.

- Party Identifiers MUST follow the PEPPOL Policy on the use of Identifiers
- Endpoint Identifiers MUST follow the PEPPOL Policy on the use of Identifiers

According to the above policy rule the shcemeID is mandatory for both elements.

#### Address identifier

Address information can be given by using an identifier. The identifier scheme itself is specified in the attributes of the element. In this example, the address identifier is using the attributes for the GLN identifier.

Postal address identifiers SHOULD be GLN.





To ease interoperability and for conformance, even if address identifiers are present in a document, the issuer is expected to provide address information, see chapter 2.1.3 on address identifiers above.

#### **Buyer - VAT ID**

The buyer may want to state their VAT identifier on the order.

```
<cac:PartyTaxScheme>
  <cbc:CompanyID schemeID="DK:VAT" schemeAgencyID="ZZZ">DK123</cbc:CompanyID>
  <cac:TaxScheme>
    <cbc:ID schemeID="UN/ECE 5153" schemeAgencyID="6">VAT</cbc:ID>
    </cac:TaxScheme>
  </cac:TaxScheme>
</cac:PartyTaxScheme></cac:PartyTaxScheme>
```

The VAT number itself is stated in the Company ID tag. As required by the EU commission, in the case of cross border trade, the VAT number itself SHOULD be prefixed with the country code of the issuing country<sup>5</sup>.

The Tax Scheme specifies that this is a VAT registration identifier. Each of the tags uses attributes to specify the ID and code scheme used and the issuing agency. The Tax Scheme Identifier must come from the UN/ECE code list 5153, but the VAT Identifiers will be issued by appropriate national institutions.

#### **Buyer - Legal Registration ID**

The company legal registration identifier is used in several countries and mandatory in some. An example of such an identification scheme is the CVR in Denmark.

```
<cac:PartyLegalEntity>
  <cbc:CompanyID schemeID="DK:CVR" schemeAgencyID="ZZZ">1234567890</cbc:CompanyID>
</cac:PartyLegalEntity>
```

# 2.5 Supplier

This part of the Order contains information about the supplier. Buyer information is shown in the: The section is in Seller Supplier Party and is framed in the following way.

#### Name

An order MUST contain the full name of the supplier. The name is stated in the following tag.

```
<cac:PartyName>
     <cbc:Name>The Office Supplier</cbc:Name>
     </cac:PartyName>
```

#### **Address**

The supplier's address can be defined in various ways depending on regions and requirements. The PEPPOL/BII specification of an address is intended to support most common requirements. The following elements can be used to display an address in the following conventional way.

Display	Source		
Sales department	Department		
main street 987	StreetName BuildingNumber		

<sup>&</sup>lt;sup>5</sup> You can verify the validity of a VAT number issued by any Member State by selecting: http://ec.europa.eu/taxation\_customs/vies/vieshome.do.





Back door	AdditionalStreetName	
Post box 123	Postbox	
Copenhagen, Österport, 2100	CityName, CountrySubentity, PostalZone	
BE	CountryIdentificationCode	

This example can then be expressed using the following elements.

In many cases the building number is stored as part of the street name, in which case the building number element is not used.

#### **Party Identifiers**

Role of the PartyID is to identify the Buyer. It can assist the receiver in automatically processing of orders and routing internally. Role of the EndpointID is to support document transport to receiver location.

- Party Identifiers MUST follow the PEPPOL Policy on the use of Identifiers
- Endpoint Identifiers MUST follow the PEPPOL Policy on the use of Identifiers

According to the above policy rule the shcemelD is mandatory for both elements.

#### Address identifier

Address information can be given by using an identifier. The identifier scheme itself is specified in the attributes of the element. In this example, the address identifier is using the attributes for the GLN identifier.

Postal address identifiers SHOULD be GLN.

To ease interoperability and for conformance, even if address identifiers are present in a document, the issuer is expected to provide address information, see chapter 2.1.3 on address identifiers above.

#### 2.6 Originator Customer party

Information about the party on whose behalf the purchase is made, i.e. the end buyer. Information about him is located in the OriginatorCustomerParty class:





#### **Customer Name**

An order MUST contain the full name of the customer. The name of the customer is stated in the following tag.

```
<cac:PartyName>
  <cbc:Name>PEPPOL</cbc:Name>
  </cac:PartyName>
```

#### Identifiers

The customer party identifier:

Party Identifiers MUST follow the PEPPOL Policy on the use of Identifiers

#### **Customer Party - contact details**

Contact person responsible for the original order:

# 2.7 Delivery information

Information about the delivery instructions for the items that are listed in the order can be given on document level and applies to all order lines. Delivery dates for individual items CAN be provided on line level. Delivery information is provided in two sections: Delivery and DeliveryTerms.

#### Delivery

Provides means to specify where delivery of the ordered items should take place. Only one mandatory delivery address on header level is allowed that applies to all order lines. The section is framed in the following way:

```
<cac:Delivery>
    ...
</cac:DeliveryTerms>
    ...
</cac:DeliveryTerms>
```

#### **Delivery location**

Information about where to deliver the actual goods or services. Delivery location applies to all order lines.

```
<cac:DeliveryLocation>
  <cac:Address>
     <cbc:ID schemeID="GLN" schemeAgencyID="9">6754238987648</cbc:ID>
     <cbc:Postbox>PO Box 7913</cbc:Postbox>
     <cbc:StreetName>Holsteinsgade</cbc:StreetName>
     <cbc:AdditionalStreetName>Back door
     <cbc:BuildingNumber>63</cbc:BuildingNumber>
     <cbc:Department>Basement Inventory</cbc:Department>
     <cbc:CityName>Copenhagen</cbc:CityName>
     <cbc:PostalZone>2100</cbc:PostalZone>
     <cbc:CountrySubentity>Österport</cbc:CountrySubentity>
     <cac:Country
        <cbc:IdentificationCode>DK</cbc:IdentificationCode>
     </cac:Country>
  </cac:Address>
</cac:DeliveryLocation>
```





Delivery location ID can be provided as AddressID as shown in the example above. The identifier scheme itself is specified in the attributes of the element. In this example, the location identifier is using the attributes for the GLN identifier.

Location identifier – SHOULD be GLN

#### **Delivery address**

The address where the items are to be delivered at can be given in the Address class as shown in the example above.

A Delivery address SHOULD contain at least city, zip code and country code.

#### **Delivery period**

The date or time period when the items should be delivered. Delivery period can be stated on line-level so delivery period should only be stated on header level if the same RequestedDeliveryPeriod applies to all Order Lines.

# **Delivery party and name**

The party and person to whom the goods/services are to be delivered to.

**Party ID and name** actual name and identifier of the agency to receive the delivery **Contact information** the person to contact about the delivery of the actual goods or services.

#### **Delivery terms**

Delivery terms provide the ability for the buyer to specify what shipping terms and location should apply to the delivery of the order.

**Terms ID** Restricted to FOB or CIF, based on Incoterms 2000.

**Special terms text** A free text description of any special terms

Delivery terms location For specifying the location at which the terms apply. Use UN/LOCODE 2007

```
<cac:DeliveryTerms>
  <cbc:ID>FOB</cbc:ID>
  <cbc:SpecialTerms>Buyer will pay transport cost</cbc:SpecialTerms>
  <cac:DeliveryLocation>
        <cbc:ID schemeID="GLN" schemeAgencyID="9">6754238987000</cbc:ID>
        </cac:DeliveryLocation>
  </cac:DeliveryLocation></cac:DeliveryTerms>
```

#### 2.8 Additional (header) information

The order may contain additional information in text or as references that apply to the order as a whole.





**Note field** A general note that applies to the order as whole.

**Booking information** This reference is the buyer's accounting code that applies to the Line Item, expressed

as text. It can be used to specify project codes or other booking references that apply to the line specifically. If a single code applies to the order as whole it should be placed in

an identical tag on document level and line level tags left empty.

The supplier is expected to return the information in the invoice. The exact codes used in each instance can be state by the buyer or can be bi-laterally or industry defined.

**Quotation reference** A unique reference to the quotation that the order is based on.

Order reference Refers to an original order that was rejected and a new order issued

Originator document Allows buyer to refer to the original internal requisition on which the order is based. This

reference can for example refer to an order placed on an in-house marketplace.

**Contract** Reference to the contract that governs the order. Restricted to only one contract.

**Contract Type** The type of the referenced contract. For example a Framework Agreement.

The information is contained in the following tags.

```
<cbc:Note languageID="EN">Ordering Office supplies</cbc:Note>
<cbc:AccountingCost>Project 123</cbc:AccountingCost>
<cac:QuotationDocumentReference>
  <cbc:ID>PEPPOL quote-123</cbc:ID>
</cac:QuotationDocumentReference>
<cac:OrderDocumentReference>
   <cbc:ID>Order 007</cbc:ID>
</cac:OrderDocumentReference>
<cac:OriginatorDocumentReference>
   <cbc:ID>PA-12001</cbc:ID>
   <cbc:DocumentType>Project plan</cbc:DocumentType>
</cac:OriginatorDocumentReference>
<cac:Contract>
   <cbc:ID>Contract 123</cbc:ID>
   <cbc:ContractType>Framework agreement</cbc:ContractType>
</cac:Contract>
```

## 2.9 Allowance and charges

In the core order the individual lines do not carry allowance or charges. Instead the allowance and charge class provides information about expected totals per stated allowance or charge reason. The goal of providing this information is to enable calculation of estimated total price of the order as basis for matching.

- The Charge Indicator specifies whether the class instance represents an allowance or a charge and must be in lowercase letters.
- AllowanceChargeReason text should be provided
- Allowance must be stated as positive number
- Allowance and charges should be stated including VAT.





#### 2.10 Order Totals

The following explains calculation of totals in an order and use of variables involved

<pre><cbc:taxamount></cbc:taxamount></pre>	Anticipated VAT total amount
<pre><cbc:lineextensionamount></cbc:lineextensionamount></pre>	Anticipated Sum of line amounts
<pre><cbc:allowancetotalamount></cbc:allowancetotalamount></pre>	Anticipated Allowance/discounts on document level
<pre><cbc:chargetotalamount></cbc:chargetotalamount></pre>	Anticipated Charges on document level
<pre><cbc:payableamount></cbc:payableamount></pre>	Anticipated Payable amount

Formulas for the above calculations are as follows

TaxAmount = ∑ Item TotalTaxAmount (sum of tax information on line level)

LineExtensionAmount = ∑ LineExtensionAmount (at line level)

AllowanceTotalAmount = ∑ Allowance Amount (in AllowanceCharge classes on document level where ChargeIndicator = "false")

ChargeTotalAmount = ∑ Charge Amount (in AllowanceCharge classes on document level where ChargeIndicator = "true")

PayableAmount = LineExtensionAmount + AllowanceTotalAmount + ChargeTotalAmount + TaxAmount

Based on the numbers in sample document above the calculations run as follows:

For the sample document above these are:

/ariable in calculation		Sample amounts	Element
Total tax	+	438,93	TaxAmount
Sum of lines	+	1.890,15	LineExtensionAmount
Allowance/discounts on document level	-	30,00	AllowanceTotalAmount
Charges on document level	+	100,00	ChargeTotalAmount
Estimated total Amount due for payment	=	2.399,08	PayableAmount

The following rules apply to use of decimals in orders:

- Amounts MUST be given to a precision of two decimals.
- Amounts at document level MUST apply to all orders lines.
- Line extension amount MUST NOT be negative
- Total payable amount MUST NOT be negative

The above example is presented in the document in the following way:

# 2.11 Additional buyer information

Additional information about the buyer can be provided in the order.

#### Buyer's legal name and address

Information about where the party is registered and its legal name can also be provided.

minormation about miles and party is registered and no regar manie can also be provided.	
<pre><cac:partylegalentity></cac:partylegalentity></pre>	
<pre><cbc:registrationname>IT og Telestyrelsen</cbc:registrationname></pre>	Legal name





<pre><cac:registrationaddress></cac:registrationaddress></pre>	
<pre><cbc:cityname>Copenahgen</cbc:cityname></pre>	Registered city
<pre><cbc:countrysubentity>Österport</cbc:countrysubentity></pre>	Region
<cac:country></cac:country>	
<pre><cbc:identificationcode>DK</cbc:identificationcode></pre>	Country
<pre></pre>	

#### **Buyer's contact details**

Contact information is separated into two components. The Person is used to give information about who the individual is, such as name and job title. The Contact in then used to give information about how this person can be contacted.

This information can be presented in conventional way as following.

John X Doe	FirstName MiddleName FamilyName	
Purchasing manager	JobTitle	
Tel: 5121230	Telephone	
Fax: 5121231	Telefax	
E mail: john@buyercompany.eu	ElectronicMail	

# This example can then be presented within the order in following way:

This example eart their be presented within the order in following way.
cac:Contact>
<pre><cbc:telephone>5121230</cbc:telephone></pre>
<pre><cbc:telefax>5121231</cbc:telefax></pre>
<pre><cbc:electronicmail>john@itst.dk</cbc:electronicmail></pre>
/cac:Contact>
cac:Person>
<pre><cbc:firstname>John</cbc:firstname></pre>
<pre><cbc:familyname>Smith</cbc:familyname></pre>
<pre><cbc:middlename>X</cbc:middlename></pre>
<pre><cbc:jobtitle>Purchasing manager</cbc:jobtitle></pre>
/cac:Person>

# 2.12 Additional supplier information

# Supplier's legal name and address

Information about where an organization is registered and its legal name can also be provided.

<pre><cac:partylegalentity></cac:partylegalentity></pre>
<pre><cbc:registrationname>The Office Supplier</cbc:registrationname></pre> /cbc:RegistrationName>
<pre><cac:registrationaddress></cac:registrationaddress></pre>
<pre><cbc:cityname>Copenhagen</cbc:cityname></pre>
<pre><cbc:countrysubentity>österport</cbc:countrysubentity></pre>
<cac:country></cac:country>
<pre><cbc:identificationcode>DK</cbc:identificationcode></pre>
<pre></pre>

# Supplier's contact details

Contact information is separated into two. Person details are used to give information about the individual, i.e. their name and job title. Contact details are then used to give information about how this person can be contacted.

<cac:contact></cac:contact>	
<cbc:telephone>4621230</cbc:telephone>	
<cbc:telefax>4621231</cbc:telefax>	
<pre><cbc:electronicmail>antonio@salescompany.dk</cbc:electronicmail></pre>	
<pre><cac:person></cac:person></pre>	
<pre><cbc:firstname>Antonio</cbc:firstname></pre>	
<cbc:familyname>Johannson</cbc:familyname>	
<pre><cbc:middlename>M</cbc:middlename></pre>	
<pre><cbc:jobtitle>Sales manager</cbc:jobtitle></pre>	





(/ang. Damaan)	

#### This information can be formatted as follows.

Antonio M Salemacher	FirstName MiddleName FamilyName
Salesmanager	JobTitle
Phone: 4621230	Telephone
Fax: 4621231	Telefax
Email: john@salescompany.dk	ElectronicMail

# 2.13 Attachment(s) (H13)

Attachments are provided to give reference to any documentation that has relevance to the order, such as drawings, technical specifications.

Any references to Additional documents MUST specify the document identifier.

The following types of document references are supported in the core order:

... as a reference to an external link (such as a web path):

# ... or as an attached document:

## PEPPOL code rule:

Mime code in attribute MUST be MIMEMediaType.

### 2.14 Order Lines

Information about ordered products or services is provided in order lines. Level of details can differ considerably and also relevance to different processes within the receiving organization. This means that different systems may select to display different level of detail, depending on the processes they support.

The following rules apply to the order line:

- An order MUST have at least one order line
- Order line MUST contain a unique line identifier

#### Line number

Every order line must have a line number. The line number is an important identifier that is used for referencing to and from other documents such as orders, credit notes and dispatch advices. Line numbers must be unique within each order.





#### **Items**

The basic information provided for identifying the item is the seller item identification, name and description.

- An order line MUST contain ID or Name
- Product names SHOULD NOT exceed 50 characters

It is recommended that LineItem. Name should always be present on all order lines for consistency and readability of orders, even if identifiers are used to identify goods or services.

**Item name** Short product name

**Item description**This element allows for longer textual description of the item that describes the

item and its features in more detail than is practical in the item name.

Seller item classification Seller item classification.

<cac:lineitem></cac:lineitem>	
<cac:item></cac:item>	
<cbc:descr< th=""><th>iption&gt;AMD Processor, 14" Display, 4GB Memory, 320GB Hard Drive</th></cbc:descr<>	iption>AMD Processor, 14" Display, 4GB Memory, 320GB Hard Drive
<cbc:name>1</cbc:name>	Laptop computer
<cac:selle< td=""><td>rItemIdentification&gt;</td></cac:selle<>	rItemIdentification>
<cbc:id< td=""><td>&gt;JB007</td></cbc:id<>	>JB007
<td>erItemIdentification&gt;</td>	erItemIdentification>

# 2.15 Quantity and price

The order quantity states how much quantity is being ordered and the "unit of measure" (UOM) used for the item. The UOM is stated as an attribute on the tag itself. In the example below the ordered quantity is 2 and the UOM is code "C62" (pieces). Visual presentation may use national abbreviations.

- Each order line SHOULD contain the quantity
- Quantity ordered MUST not be negative
- Quantities MUST have unit of measure

<pre><cac:lineitem></cac:lineitem></pre>	
<pre><cbc:quantity unitcode="C62">1</cbc:quantity></pre>	
• • •	

# **Unit price**

The unit price is net price without VAT. This means that any charges, discounts and taxes (other than VAT) have already been calculated into the price.

- Price is excluding VAT, including all other taxes and charges.
- Prices of items MUST not be negative

The Unit of Measure (UOM) for the price is stated as an attribute of the optional field BaseQuantity. If the BaseQuantity is not present the UOM on which the price is based is assumed to be the same as the UOM for the ordered quantity. The BaseQuantity value is assumed to be 1 if not present.

- Base Quantity Default value is 1.
- Line Item Quantity and Item Price Base Quantity SHOULD use the same UOM
- Base Quantity MUST be greater than zero

```
<cac:Price>
  <cbc:PriceAmount currencyID="EUR">1499.00</cbc:PriceAmount>
  <cbc:BaseQuantity unitCode="C62">1</cbc:PriceAmount>
  </cac:Price>
```





#### 2.15.1 Line amount

The amount for each line is stated in the Line Extension Amount.

If item price is given in the line then the LineExtensionAmount SHOULD equal the order line Quantity multiplied by the Price Amount. Consequently the UOM for the two SHOULD be the same.

The Line Extension Amount is the net amount excluding VAT. This means that all taxes, allowances and charges on the item are included in the amount.

The formula for calculation of LineAmount is then as follows:

IF BaseQuantity is present THEN

LineExtensionAmount = PriceAmount / BaseQuantity \* OrderedQuantity

**ELSE** 

LineExtensionAmount = PriceAmount \* OrderedQuantity

**END IF** 

#### The results of this calculation is states as:

<pre><cac:orderline></cac:orderline></pre>	
<cac:lineitem></cac:lineitem>	
<pre><cbc:lineextensionamount currencyid="EUR">1499.00</cbc:lineextensionamount></pre>	Line amount

#### 2.16 Additional information on line

Different additional information can be provided on line level and may be useful when automating the order process and later the invoice reconciliation. These are:

**Line note** A general text note that applies to a specific order line.

Notes that apply to the order as a whole should be placed on document level. On paper orders it is common practice to use order lines – often referred to as "zero lines" – to add text notes to the order. This is not supported in an electronic order and the

header level note element should be used instead.

Structured properties should not be stated as part of description, but stated as

additional item property.

**Booking information** This reference is the buyer's accounting code that applies to the Line Item, expressed

as text. It can be used to specify project codes or other booking references that apply to the line specifically. If a single code applies to the order as whole it should be

placed in an identical tag on document level and line level tags left empty.

The supplier is expected to return the information at line level in the invoice. The exact codes used in each instance are mutually agreed between buyer and seller and can

be bi-laterally or industry defined or provided by the seller.

Standard item identifier This is an item identification number that is based on a standardized schema. If

standard identifiers are provided within an item description, an Schema Identifier

SHOULD be provided (e.g. GTIN).

Item Properties Various properties for the item, such as colour, size etc. It is possible to provide these

as free text in the item description but if they are to be used in automatic processing of the order then they must be stated structurally. The class uses two elements, one that

states the names of the property and the second that gives its value.

<pre><cac:orderline></cac:orderline></pre>	
<pre><cbc:note languageid="EN">Scratch on box</cbc:note></pre>	Line note
<pre><cbc:accountingcost>BookingCode001</cbc:accountingcost></pre>	Booking reference
<cac:item></cac:item>	
<pre><cac:standarditemidentification></cac:standarditemidentification></pre>	





<pre><cbc:id schemeagencyid="9" schemeid="EAN13">1234567890124</cbc:id></pre>	Standard item ID
<pre></pre>	
<pre><cac:additionalitemproperty></cac:additionalitemproperty></pre>	
<pre><cbc:name>Color</cbc:name></pre>	Property name
<cbc:value>Black</cbc:value>	Property value

# 2.17 Line level - Delivery and parties

## **Delivery on line level**

Processes around backordering of items is specific to type of items and industry. The rules are usually stated in contracts or known informally among the parties. In core order the Partial Delivery indicator is used to indicate the default behavior to be expected. IF:

- <u>false</u> if the supplier fulfils the order partially the outstanding items are not placed on backorder and the rest of the order is cancelled.
- <u>true</u> the order can be delivered partially and the rest can be delivered later and possibly placed on backorder. Backorder is indicated by
  - delivering partially and invoicing the full number of items ordered.
  - If the invoice covers only delivered items, it indicates that the rest of the order is to be cancelled.

```
<cbc:PartialDeliveryIndicator>true</cbc:PartialDeliveryIndicator>
```

It is possible to state delivery information on line level and it is used to specify different delivery dates for item lines. This enables buyers to specify how lines are to be delivered over time. The location is stated on the header and cannot be stated on lines.

#### Parties on line level

It is possible to state originator party on line level for each line.





# 3 Implementation support package

PEPPOL provides a package of supportive files that includes among others, the following files. The PEPPOL extension is identified as: eugen. Further information on implementation support can be found at [PEPPOL\_PostAward].

#### 3.1 Test files

See the "test files" directory.

#### Order

▶ BIS03-Order

# 3.2 Stylesheets

See the "stylesheets" directory.

#### Order

PEPPOL BIS-3a stylesheet.xsl

# 3.3 Rule binding

See the relevant "businessrules" directory.

#### Order

- biicore-T01-BusinessRules-v01.ods
- biiprofiles-T01-BusinessRules-v01.ods
- biirules-T01-BusinessRules-v02.ods
- eugen-T01-BusinessRules-v02.ods

# 3.4 List of artefacts

The following artefacts have been developed and made available for applying the above specification.

#### 3.4.1 Context Value Association Files

See the relevant "cva" directory.

#### Order

- BIIRULESCodesT01.cva
- EUGENCodesT01.cva

# 3.4.2 Genericode Files

See the relevant "gc" directory.

Bii

- AccountTypeCode.gc
- AddressFormatCode.gc
- AllowanceChargeReasonCode.gc
- BinaryObjectMimeCode.gc
- ChannelCode.gc
- CountryIdentificationCode.gc
- CountrySubentityCode.gc
- CurrencyCode.gc
- DeliveryTermsID.gc
- DiscrepancyResponseCode.gc
- DocumentTypeCode.gc
- InvoiceTypeCode.gc
- ParentDocumentTypeCode.gc
- PartyID.gc





- PaymentChannelCode.gc
- PaymentMeansCode.gc
- ResponseCode.gc
- StatusCode.gc
- TaxCategoryID.gc
- TaxExemptionReasonCode.gc
- TaxSchemeID.gc
- TaxTypeCode.gc
- UnitOfMeasureCode.gc

#### Eugen:

- CommodityClassificationCode.gc
- FinancialInstitutionIdentifier.gc
- ItemIdentifier.gc
- LocationIdentifier.gc
- PartyID.gc
- Partyldentifier.gc
- PostalAddressIdentifier.gc

# 3.4.3 Schematron Files

See the relevant "schematron" directory.

#### Order

- BIICORE-UBL-T01.sch
- 1
- BIIRULES-UBL-T01.sch
- EUGEN-UBL-T01.sch

# 3.4.3.1 Abstract fragment

See the relevant "Schematron/abastract" directory.

#### Order

- ▶ BIICORE-T01.sch
- BIIRULES-T01.sch
- EUGEN-T01.sch

# 3.4.3.2 Codelist fragment

See the relevant "Schematron/codelist" directory.

#### Order

- BIIRULESCodesT01.sch
- .

# 3.4.3.3 Ubl syntax binding

See the relevant "Schematron/UBL" directory.

#### Order

- ▶ BIICORE-UBL-T01.sch
- BIIRULES-UBL-T01.sch
- EUGEN-UBL-T01.sch





# 3.4.4 Validation XSLT

See the relevant "Schematron/validation-xslt" directory.

## Order

- ▶ BIICORE-UBL-T01.xsl
- BIIRULES-UBL-T01.xsl
- ▶ EUGEN-UBL-T01.xsl

