



DIGITALISERINGSSTYRELSEN

OIOUBL Guideline

OIOUBL Catalogue item description and categorization

UBL 2.0 Varebeskrivelser og kategorisering i kataloger

G38

Version 1.3

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Colophon

Contact:

Danish Agency for Digitisation

E-mail: support@nemhandel.dk

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Danish Agency for Digitisation

Landgreven 4
DK-1017 Copenhagen
Phone +45 3392 5200
<http://www.digst.dk>
digst@digst.dk

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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.

1.1. Purpose of this document

This guideline defines how items are described in the following Catalogue documents.

Document	Description
UBL-Catalogue-2	The Catalogue document is always used when creating a new catalogue. It may also be used for updating an existing catalogue. For a more detailed description, please see the OIOUBL Catalogue guideline (Ref. G03)
UBL-CatalogueItemSpecificationUpdate-2	The document used for updating the item specification in an existing catalogue. For a more detailed description, please see the OIOUBL Guideline Catalogue Item Specification Update (Ref. G06)

Special attention is given to:

- The elements for describing an item
- The use of attributes for further descriptions
- Specifying related items
- Categorization of items, and both its category (local) and common (global) attributes

1.2. General Points

Encrypted delivery should be used when a CPR number is used as an ID.

In order to add a new item or update an item in an existing catalogue, the item must be uniquely identifiable by use of its *CatalogueLine/ID*.

More detailed descriptions of specific areas of Catalogue usage are provided in the following guidelines:

- OIOUBL Guideline Catalogue Pricing (Ref. G40)
- OIOUBL Catalogue Identification, Versioning and Validity Periods (Ref. G37)
- OIOUBL Guideline Catalogue Parties (Ref. G39)

1.3. Changes in version 1.3

In this latest update of this guideline the following has been changed:

- Questions and answers from FAQ on OIOUBL.info has been incorporated

2. Relevant UBL Classes and Elements

Each catalogue must contain a minimum of one *CatalogueLine*, and this line must contain at least one *Item*.

A number of further elements may be used for each catalogue line, such as ordering and warranty information, references to external documents such as contracts, relationships to other items, information on packaging units, prices and delivery units collected in the *RequiredItemLocationQuantity* class etc.

Many of these details are necessary to ensure that the correct items are ordered, such as the correct units and price. Some details are not required to create or order a catalogue line, but are important for describing the items in a way that they can be searched in a catalogue. These provide the customer with sufficient information to evaluate and compare different products.

The classes and elements relevant for the describing an item are found in the *Item* class. These are:

- *Description*
- *Name*
- *AdditionalInformation*
- *KeyWord*
- *BrandName*
- *ModelName*
- *AdditionalItemProperty*
- *ItemIdentification* (up to six different item identifiers may be entered, such as the Supplier's ID, Manufacturer's ID, etc.)

In addition, different classes are available for defining relationships between items:

- *RelatedItem*

and for classifying items:

- *CommodityClassification*

2.1. DK names and cardinality

The table below lists the elements and their names in Danish, as well as their cardinality.

2.1.1. Describing an item

The elements that are central to the description of items are:

UK-name	DK-name	Use	Remarks
Catalogue/CatalogueLine/Item	Vare	1	For each Catalogue line one item must be specified.
Catalogue/CatalogueLine/Item/Description	Description	0..n	A more detailed description of the item may be specified. Such as "Nokia 6280 with camera, video recorder, and color display".
Catalogue/CatalogueLine/Item/Name	Navn	1	The Item name (sometimes known as the item text). For example, "Copy paper A4", "Nokia 6280", or "Da Vinci Code, The"

			The name should give the customer the ability to recognize and compare products.
Catalogue/CatalogueLine/Item/AdditionalInformation	SupplerendeInformation	0..1	A text field for further item information. For example, the URL of a relevant website
Catalogue/CatalogueLine/Item/Keyword	Nøgleord	0..n	Any keywords or search words that may facilitate item searches. It is important to consider which terms customers typically identify the item with. For example, "mobile phone" (If an item is only described as "Nokia 6280", searches for "mobile phone" will not find it).
Catalogue/CatalogueLine/Item/BrandName	MærkeNavn	0..n	Any brand name, such as "Nokia", "Duracell", "Lego", etc.
Catalogue/CatalogueLine/Item/ModelName	ModelNavn	0..n	The model, such as "6280" or "Corolla".
Catalogue/CatalogueLine/Item/AdditionalItemProperty	SupplerendeVareEgenskaber	0..n	This class makes it possible to specify additional item properties. The properties can be specified as category attributes (see section 3.1.2).
Catalogue/CatalogueLine/Item/AdditionalItemProperty/Name	Navn	1	The name of the item property, such as "Year", "Color", etc.
Catalogue/CatalogueLine/Item/AdditionalItemProperty/Value	Værdi	1	The value of the item property, such as "2001", "Blue", etc.
Catalogue/CatalogueLine/Item/AdditionalItemProperty/UsabilityPeriod	BrugbarhedsPeriode	0..1	A period for which the item property is usable. For example, shelf life of perishable goods.
Catalogue/CatalogueLine/Item/AdditionalItemProperty/ItemPropertyGroup	VareEgenskabsGruppe	0..n	Some properties are not relevant for all item categories, e. g. "Year". It is possible to specify which category a given property applies to (see section 3.1.2.3).
Catalogue/CatalogueLine/Item/AdditionalItemProperty/ItemPropertyGroup/ID	ID	1	To specify the identifier for the item category to which the property applies. For example, UNSPSC code "50202203".
Catalogue/CatalogueLine/Item/AdditionalItemProperty/ItemPropertyGroup/Name	Navn	0..1	To specify a name for the item category to which the attribute applies. For example, "Wine".

2.1.2. ItemIdentification

Up to six item identifications are available under the Item class. These are described more fully in section 3.3.

The table below only describes the *SellersItemIdentification*. This is the only one of the six item identifications that is mandatory and allows for further item descriptions may be specified.

UK-name	DK-name	Use	Remarks
Catalogue/CatalogueLine/Item/SellersItemIdentification	SælgersVareIdentifikation	1	Seller's identification of the item
Catalogue/CatalogueLine/Item/SellersItemIdentification/ID	ID	1	Item identification number defined by the seller, e. g. "1234". Note this need not be numeric.
Catalogue/CatalogueLine/Item/SellersItemIdentification/ExtendedID	UdvidetID	0..1	An extra item identification. For example, this may be used for specifying different configurations, such as the number "1234-56-78". This may actually be a combination of: 1234 = Chair 56 = Wool textile 78 = Red
Catalogue/CatalogueLine/Item/SellersItemIdentification/PhysicalAttribute	FysiskeAtributter*	0..n	This class allows the supplier the option of adding further attributes to the description based on its physical properties.
Catalogue/CatalogueLine/Item/SellersItemIdentification	AttributID*	1	Identification of the attribute, e. g. "Color"

on/PhysicalAttribute/AttributeID			or "Size".
Catalogue/CatalogueLine/Item/SellersItemIdentification/PhysicalAttribute/Description	Beskrivelse*	1..n	The value of the attribute defined under AttributeID. For example, "Red" or "Medium". This may be specified in more than one language but only one description per language is allowed.
Catalogue/CatalogueLine/Item/SellersItemIdentification/MeasurementDimension	MåleDimension*	0..n	This class gives the supplier the option of defining measurable item properties. For example, as used for ordering timber.
Catalogue/CatalogueLine/Item/SellersItemIdentification/MeasurementDimension/AttributeID	AttributID*	1	Identification of the attribute, e. g. "Weight" or "Height".
Catalogue/CatalogueLine/Item/SellersItemIdentification/MeasurementDimension/Measure	Måling *	0..1	The value of the attribute defined under AttributeID, as listed above, e. g. "150" (Grams) or "1" (Meter). The unit is specified in the unitCode attribute, as described below.
Catalogue/CatalogueLine/Item/SellersItemIdentification/MeasurementDimension/Measure@unitCode			The unit for the value in Measure specified as a valid unit of measure, e. g. "GRM" for Grams, or "MTR" for Meters.
Catalogue/CatalogueLine/Item/SellersItemIdentification/MeasurementDimension/Description	Beskrivelse*	0..n	Instead of specifying a structured value, the dimensions may be entered as text. For example, "150 grams" or "1 Meter". This may be specified in more than one language but only one description per language is allowed. Can only be used if bilateral agreed.
Catalogue/CatalogueLine/Item/SellersItemIdentification/IssuerParty	Udsteder	0..1	For every ItemIdentification it is possible to specify an IssuerParty. This is the party responsible for the identification scheme if this not one of the SellerParty identified at document level. For further information see the OIOUBL Guideline Catalogue Parties (Ref. G39) Can only be used if bilateral agreed.

*elements only available for SellersItemIdentification

2.1.3. Classification

The classification of an item is specified by the *CommodityClassification* class:

UK-name	DK-name	Use	Remarks
Catalogue/CatalogueLine/Item/CommodityClassification/CommodityCode	VareTypeKode	0..1	The code for the classification of the item used for international harmonized commercial goods. Often provided for regulatory (customs or trade statistics) purposes.
Catalogue/CatalogueLine/Item/CommodityClassification/ItemClassificationCode	VareKlassifikationsKode	1	The standard item classification. All items must be classified according to the UN/SPSC classification (always 8 digits). Other item classifications may also be specified if required.
Catalogue/CatalogueLine/Item/CommodityClassification/ItemClassificationCode@listName			Name of the code list, such as "UN/SPSC".
Catalogue/CatalogueLine/Item/CommodityClassification/ItemClassificationCode@listVersionID			The version of the classification scheme. Use only one version in each catalogue. Use of UN/SPSC version 7.0401 is recommended. A Danish translation is available.

2.1.4. Relationships between Items

Under *CatalogueLine* are five *RelatedItem* classes that may be used for relating other items to the item in question. This may be used for defining component parts, accessories (optional or

mandatory), replacement items or complementary items. The items related to should also be in the catalogue.

The five *RelatedItem* classes are all structured in the same way. For simplicity the table below only shows *ComponentRelatedItem*.

UK-name	DK-name	Use	Remarks
Catalogue/CatalogueLine/ComponentRelatedItem/ID	ID	1	Identification of the related item. The ID should be the CatalogueLine/ID for the related item. For example, if the item were a bike, the related component may be a bike tire with an ID of "11223344_1234".
Catalogue/CatalogueLine/ComponentRelatedItem/Quantity	Mængde	0..1	The Quantity of the related item, e. g. "1" (pcs.)". The unit is specified in the unitCode attribute, as shown below.
Catalogue/CatalogueLine/ComponentRelatedItem/Quantity@unitCode			The unit for the quantity, e. g. "EA" for each.
Catalogue/CatalogueLine/ComponentRelatedItem/Description	Description	0..n	Description of the related component, such as "Bike tire 10 x 1.75, black".

2.1.5. Description of TradingTerms

The trading terms are specified in the *TradingTerms* class at the document level.

It is not possible to specify trading terms for an individual catalogue line item. If particular trading terms apply to the handling of one or more items, such as freight or handling fees, this must be specified at document level.

UK-name	DK-name	Use	Remarks
Catalogue/TradingTerms/Information	Information	0..n	Text field for trading terms information.
Catalogue/TradingTerms/Reference	Reference	0..1	Text field for any references.
Catalogue/TradingTerms/ApplicableAddress	GældendeAdresse	0..1	Address class for restricting the trading terms to a specific geographical area.

3. Description

In this section the individual Catalogue documents are described further, with a particular focus on how catalogue items are described and classified.

3.1. Item description

When describing an item *Name* is the only mandatory field in the *Item* class. *Name* is for entering the common name of the product in question. *Description* can be used for a longer item description. *Name* is typically what will appear on any subsequent order or invoice.

For most catalogue users, it is more convenient to use several other elements for describing products or services. Often this helps distinguish between and compare different products. Figure 1 is an example of how this may be done:

```
<cac:Item>
  <cbc:Description>Nokia Mobile telephone - Type ABC</cbc:Description>
  <cbc:PackQuantity unitCode="EA">1</cbc:PackQuantity>
  <cbc:PackSizeNumeric>1</cbc:PackSizeNumeric>
  <cbc:Name>Nokia ABC</cbc:Name>
  <cbc:Keyword>Mobile Phone</cbc:Keyword>
  <cbc:BrandName>Nokia</cbc:BrandName>
  <cbc:ModelName>ABC</cbc:ModelName>
  <cac:SellersItemIdentification>
    <cbc:ID>87067606</cbc:ID>
  </cac:SellersItemIdentification>
  <cac:ItemSpecificationDocumentReference>
    <cbc:ID>NOKIA_ABC</cbc:ID>
    <cbc:DocumentTypeCode listAgencyID"320" listID="urn:oioubl:codelist:
cataloguedocumenttypecode-1.1">ProductSheet</cbc:DocumentTypeCode>
    <cac:Attachment>
      <cac:ExternalReference>
        <cbc:URI>http://www.teleeksperten.dk/nokia_abc_produktblad.pdf</cbc:URI>
      </cac:ExternalReference>
    </cac:Attachment>
  </cac:ItemSpecificationDocumentReference>
  <cac:CommodityClassification>
    <cbc:ItemClassificationCode listName="UNSPSC" listVersionID="7.0401">43191501
  </cbc:ItemClassificationCode>
  </cac:CommodityClassification>
  <cac:AdditionalItemProperty>
    <cbc:Name>Weight</cbc:Name>
    <cbc:Value>180 g</cbc:Value>
  </cac:AdditionalItemProperty>
</cac:Item>
```

Figure 1: Example of the descriptions used for an Item

The *PackQuantity* and *PackSizeNumeric* specify pack sizes. For a more detailed description of this topic, refer to the OIOUBL Guideline Catalogue Pricing (Ref. G40).

It is also possible to refer to further descriptive information about an item using the *ItemSpecificationDocumentsReference*. For example, this may specify a URI for external documents such as pictures, product sheets, drawings, etc.

In the example, the name of the item is 'Nokia ABC', but if the users search for, for example, mobile phone the item will not be found. Using one or more *Keywords* facilitates searching in a catalogue. Keywords are also where synonyms for the item may be specified.

Under *ModelName* and *BrandName*, respectively, the model and the brand are entered.

In this example only the *SellersItemIdentification* is used, but an item may be identified based on schemes from different parties. This topic will be described in the section 3.3.

The classification of the items under *CommodityClassification* will be covered in the section 3.2.

Under *AdditionalItemProperty* further item properties may be specified using name/value pairs. In *Name* the property is identified, for example "Size", "Height", "Weight", "Color", etc. In *Value* the property's value is given, for example "XL", "130 CM", "2 KG", "Blue", etc.

3.1.1. Specifying illustrations, product sheets, etc.

A reference may be given to a photograph, product sheet, leaflet or illustration that may provide more information about the item. The reference is made for a catalogue line item under *CatalogueLine/Item/ItemSpecificationDocumentReference*. This can be repeated as many times as necessary.

It is probable that different catalogues will handle graphical information differently, so it is possible either to enter a link to an external picture as a *URI*, or to a picture that is part of the catalogue itself, and referenced internally using the file name only.

In the latter case, the name of the picture is specified as the ID, and *DocumentTypeCode* should in both cases specify that it is a picture (*DocumentTypeCode*="Picture", as per code list Ref. K05).

If the image is specified as a file, the pictures must be sent to the receiver separately. Figure 2. is an example of specifying a graphical image as a file.

```
<cac:CatalogueLine>
...
  <cac:Item>
    ...
    <cac:ItemSpecificationDocumentReference>
      <cbc:ID>nokiaabc.jpg</cbc:ID>
      <cbc:DocumentTypeCode listAgencyID"320" listID="urn:oioubl:odelist:
cataloguedocumenttypecode-1.1">Picture</cbc:DocumentTypeCode>
    </cac:ItemSpecificationDocumentReference>
    ...
  </cac:Item>
</cac:CatalogueLine>
```

Figure 2: Example of a graphical image as a file

If the picture is defined as an external link, (*DocumentTypeCode* is specified as "PictureURL", as per code list Ref. K05). Note that with the schematron release 15/9 2014 the code list was updated to a version 1.2 where the value "PictureURL" was added.

The link to the image is specified in the *Attachment/ExternalReference/URI* element.

```

<cac:CatalogueLine>
...
  <cac:Item>
    ...
    <cac:ItemSpecificationDocumentReference>
      <cbc:ID>nokiaabc</cbc:ID>
      <cbc:DocumentTypeCode listAgencyID"320" listID="urn:oioubl:codelist:
cataloguedocumenttypecode-1.1">Picture</cbc:DocumentTypeCode>
      <cac:Attachment>
        <cac:ExternalReference>
          <cbc:URI>www.nokia.dk/nokiaabc.jpg</cbc:URI>
        </cac:ExternalReference>
      </cac:Attachment>
    </cac:ItemSpecificationDocumentReference>
    ...
  </cac:Item>
</cac:CatalogueLine>

```

Figure 3: Example of an image as an external link

Links to other documents are specified in similar manner. In such cases the *DocumentTypeCode* specifies the type of documents in question (such as "Brochure", "ProductSheet" or "Drawing", as per code list Ref. K05).

3.1.2. Adding additional properties for an item

It is possible to add additional properties to supplement an item's description using the *CatalogueLine/Item/AdditionalItemProperty* element.

Many item properties will occur repeatedly in a single catalogue without any specifically named elements being defined for them. These cannot be defined in OIOUBL because they are affected by the type of items in the catalogue. For example, some items require environmental and energy certificates or use a supplier's set of item properties. To ensure consistency in use for these properties, the following practices are recommended.

In the *AdditionalItemProperty* class the *Name* and *Value* fields are found. *Name* defines the name of the property, and *Value* defines the value that the property has.

3.1.2.1. Specifying ECO and energy labels etc.

Certifications, including ECO labels (such as the Swan label), energy ratings (such as Energy A), and similar accreditations (such as the Røde Ø ecology label), should be specified as shown in figure 4. Below ("sva" for the Swan lable).

```

<cac:AdditionalItemProperty>
  <cbc:Name>Mærkning</cbc:Name>
  <cbc:Value>sva</cbc:Value>
</cac:AdditionalItemProperty>

```

Figure 4: Example of specifying ECO labels

To ensure a common practice for specifying different ECO labels, a guiding list has been created (http://www.truelink.dk/media/Varemarker_V1.pdf). It is important to stress that the list is only a

guideline, and the Danish Agency for Digitisation is not responsible for maintaining this list. It is recommended to use the short code in the *Value* field.

The *AdditionalItemProperty* class may be repeated for every certification specified for the item in question. Only the code in the *Value* field is changed.

Find examples on ECO labels in generic code on: <http://www.oioubl.info/downloads/Label-1.0.xml>

3.1.2.2. Specifying the supplier's item grouping

The supplier's own item grouping is a frequent property in a catalogue. An example of this type of information is shown in figure 5 below:

```
<cac:AdditionalItemProperty>
  <cbc:Name>Leverandør varegruppe</cbc:Name>
  <cbc:Value>124512</cbc:Value>
</cac:AdditionalItemProperty>
```

Figure 5: Example of specifying the supplier's item grouping

The supplier's terminology for its groups can be specified as an identifier (if a formal scheme exists) or descriptive text in the *Value* element.

3.1.2.3. The use of common and category properties

In the catalogue documents common properties (also known as global attributes) are distinguished from category properties (also known as local attributes).

Common properties contain a value which can be applied to all catalogue items, such as *ItemName*, *OrderableUnit*, *Model*, *Price*, etc.

Category properties are only applicable to certain categories of items that are represented in the catalogue. For example, it may not be meaningful to specify a color or a height for foodstuffs, or the year of manufacture for shoes.

Both common and category properties are specified in *AdditionalItemProperty*, as shown in the example.

```
<cac:AdditionalItemProperty>
  <cbc:Name>Weight</cbc:Name>
  <cbc:Value>180 g</cbc:Value>
  <cac:ItemPropertyGroup>
    <cbc:ID schemeName="UNSPSC" schemeVersionID="7.0401">43191501</cbc:ID>
    <cbc:Name>Mobile Phones</cbc:Name>
  </cac:ItemPropertyGroup>
</cac:AdditionalItemProperty>
```

Figure 6: Specifying category properties

Note that only the identifier (*ID*) in a *ItemPropertyGroup* is mandatory.

If *ItemPropertyGroup* is not specified, then the added property is considered a common property. The property can also be applied to all items by specifying the value of *ItemPropertyGroup/ID* as "ROOT".

For the category properties the *ItemPropertyGroup* specifies which group (or classification) the property belongs to. In the example shown in Figure 6 "Weight" is specified as a category property that only applies to the UN/SPSC class, "43191501 Mobile Phones". In the attributes *schemeName*

and *schemeVersionID* it is specified to which classification the category property applies, in the example UNSPSC version 7.0401.

The use of category properties must be agreed with the recipients of the catalogue, as their internal systems must be set up to handle the use of them.

3.2. Item classification

Several classifications may be specified in a catalogue. As a minimum, the items must be classified according to the UN/SPSC standard.

The UN/SPSC standard operates with four levels, as demonstrated in the following example for “Mobile Phones”:

Level:	Code:	Title:
Segment:	43000000	Information Technology Broadcasting and Telecommunications
Family:	43190000	Communications Devices and Accessories
Class:	43191500	Personal communication devices
Category:	43191501	Mobile phones

In the catalogue documents it is the UN/SPSC code that is used and not the title. The code should be specified using 8 digits. It is also recommended that items be classified at the lowest level possible, preferably at category or class level.

The item in the example is classified according to version 7.0401 of the UN/SPSC as specified in in the *ItemClassificationCode* element as shown in Figure 7.

```
<cac:CommodityClassification>  
  <cbc:ItemClassificationCode listName="UNSPSC" listVersionID="7.0401">43191501  
  </cbc:ItemClassificationCode>  
</cac:CommodityClassification>
```

Figure 7: Item commodity classification

This version of the UN/SPSC is available in an official Danish translation (see <http://www.gs1.dk/unspscdk3>).

If a subsequent request (using a *CatalogueRequest* document) is made for a given UN/SPSC category, a request for "43000000" will return all items that are classified at the segment level (that is, they have classification code of “43000000”). However, a request for "43*" will return all items in segment and sub-levels. (Refer the document guideline for *CatalogueRequest* Ref. G04 for more details).

Other classification schemas may also be used. The attributes for the code must describe which classification standard is being used as in the UN/SPSC example where the *listName* and *listVersionID* are specified.

3.3. Various Item Identifications

Different parties may each have their own identifying items, and these should be specified under the Item class. However, as mentioned earlier, only *SellersItemIdentification* allows for additional physical properties.

- *SellersItemIdentification* is the seller's item identification, and must be specified for all items.
- *BuyersItemIdentification* is the buyer's item identification and requires that the buyer has previously specified these to the catalogue provider.
- *ManufacturersItemIdentification* is the manufacturer's item identification.
- *StandardItemIdentification* is a standard item identification, such as the EAN number (GTIN).
- *CatalogueItemIdentification* is the item identification in a specific catalogue.
- *AdditionalItemIdentification* makes it possible to add further item identifications, such as an internal or generic item number.

```

<cac:SellersItemIdentification>
  <cbc:ID>87067606</cbc:ID>
  <cbc:ExtendedID>87067606-SIL</cbc:ExtendedID>
  <cac:PhysicalAttribute>
    <cbc:AttributeID>Colour</cbc:AttributeID>
    <cbc:Description>Silver</cbc:Description>
  </cac:PhysicalAttribute>
  <cac:MeasurementDimension>
    <cbc:AttributeID>Height</cbc:AttributeID>
    <cbc:Measure unitCode="CMT">10</cbc:Measure>
  </cac:MeasurementDimension>
  <cac:IssuerParty/>
</cac:SellersItemIdentification>

```

Figure 8: Example of ItemIdentification

In this example *SellersItemIdentification* is shown. Note that the *PhysicalAttribute* and *MeasurementDimension* classes are only allowed here, and not in the other five *ItemIdentifications*.

The identifier (*ID*) specifies what is often known as the item number, as defined by the party in question. If it uses a standardized item identification scheme such as an EAN number (GTIN), this must be specified in the *schemeID* attribute (for example, `<cbc:ID schemeID="GTIN">5791234567890</cbc:ID>`).

ExtendedID is a further identifier, often used in cases where a configuration number is used. For example, all the chairs of a particular type have same item number with a furniture manufacturer (such as “1234”). The extended identifier is built based on the textile, color, with/without armrest, type of wheels, etc. This means that “1234-09-23-U-H” identifies a chair with woolen covers, color blue, without armrest, and with hard wheels.

An *IssuerParty* may be specified as the the party responsible for maintaining the item identification scheme. A further explanation of this is found in the Guideline Catalogue Parties (Ref. G39).

3.3.1. PhysicalAttributes under the item identifications

In cases where the Catalogue Provider may have specified an *ExtendedID* to describe a product configuration, the *PhysicalAttribute* class may also be used to describe the configurations further. If in the previous example the mobile phone was available in several colors, but the color of a specific variant is “Silver” then the *PhysicalAttribute/AttributeID* would specify "Color", and the *PhysicalAttribute/Description*, "Silver". A *PhysicalAttribute* class may be repeated for every attribute required.

MeasurementDimension works according to the same principle as *PhysicalAttribute*, and gives the supplier the opportunity to specify information about the size of an item. As such they are described by measurements, as in the previous example where *AttributeID* is "Height". The *Measure* element specifies the value, for example, "10". And the units of measure are specified in the *unitCode* attribute, e. g. "CMT" (CMT is the valid Unit of Measure code for Centimeters).

3.4. Related items

Each individual catalogue line is able to specify relationships between the item in question and other items. These relationships to other items may have different characteristics as identified by the following classes:

- *ComponentRelatedItem* describes components, such as spare parts for the item.
- *AccessoryRelatedItem* describes accessories to the item, such as printer cartridge for printer or headphones for a mobile phone, etc.
- *RequiredRelatedItem* describes required additional items such as a subscription for a mobile phone.
- *ReplacementRelatedItem* describes any replacement items. That is, items that may be substitutes for the item in question.
- *ComplementaryRelatedItem* describes items that are often bought together with the item in question, such as barbecue coals for a grill.

The example shown in Figure 9 below describes the use of *AccessoryRelatedItem*, but the principle is the same for all *RelatedItems*.

```
<cac:AccessoryRelatedItem>
  <cbc:ID>45656787-951951</cbc:ID>
  <cbc:Quantity unitCode="EA">1</cbc:Quantity>
  <cbc:Description>Headset</cbc:Description>
</cac:AccessoryRelatedItem>
```

Figur 9: Example of related items

ID contains the identifier for the related item. Typically, this will also be defined in the same catalogue. In such cases the identifier referred to here is the related item's *CatalogueLine/ID*.

Quantity specifies the quantity of the related item. In the example, the quantity is "1", and in the *unitCode* attribute the unit of measure is defined as "EA" (the valid code for "each").

Description contains a text description of the related items. This may be the same as the *Description* for the related item's *CatalogueLine/Item/Description*.

4. Examples

The following examples show how to use the elements for describing and classifying an item.

4.1. Simple item description and classification

In this example, a bottle of Chateau Canterane Saint-Emilion red wine is being defined. It has an item number, “FR123” and also an identifier of “12457812-FR123”.

The wine is sold in boxes of 12 bottles at a price of DKK 65.00 per bottle. The wine has been classified according to UN/SPSC version 7.0401.

The item's description must include a unique item identification for its *CatalogueLine/ID*. This may be a combination of the supplier's ID and the item ID as outlined in the OIOUBL Guideline Catalogue Identification, Versioning and Validity Periods (Ref. G37).

In addition, an *OrderableUnit* must be specified, as well as a *PriceAmount* and a *BaseQuantity*. Prices and units are described in further detail in the OIOUBL Guideline Catalogue Pricing (Ref. G40).

```
<Catalogue>
....
  <cac:CatalogueLine>
    <cbc:ID>12457812-FR123</cbc:ID>
    <cbc:ActionCode listAgencyID="320" listID="urn:oioubl:codelist:catalogueactioncode- 1.1">Add</cbc:ActionCode>
    <cbc:OrderableUnit>CS</cbc:OrderableUnit>
    <cbc:ContentUnitQuantity unitCode="BO">12</cbc:ContentUnitQuantity>
    <cac:RequiredItemLocationQuantity>
      <cbc:LeadTimeMeasure unitCode="DAY">3</cbc:LeadTimeMeasure>
      <cac:Price>
        <cbc:PriceAmount currencyID="DKK">65.00</cbc:PriceAmount>
        <cbc:BaseQuantity unitCode="BO">1</cbc:BaseQuantity>
        <cbc:OrderableUnitFactorRate>1</cbc:OrderableUnitFactorRate>
      </cac:Price>
      <cac:ApplicableTaxCategory/> <!--Should be specified in the document-->
    </cac:RequiredItemLocationQuantity>
    <cac:Item>
      <cbc:Description>Chateau Canterane Saint-Emilion</cbc:Description>
      <cbc:Name>Chateau Canterane</cbc:Name>
      <cac:SellersItemIdentification>
        <cbc:ID>FR123</cbc:ID>
      </cac:SellersItemIdentification>
      <cac:CommodityClassification>
        <cbc:ItemClassificationCode listVersionID="7.0401" listName="UNSPSC">50202203
      </cbc:ItemClassificationCode>
      </cac:CommodityClassification>
    </cac:Item>
  </cac:CatalogueLine>
  ...
```

```
</Catalogue>
```

Figure 10: Example of simple item description

In this example, the Item class also contains the item's name (*Name*) and a longer description (*Description*). For *SellersItemIdentification/ID*, the supplier's item identifier is used.

For *CommodityClassification/ItemClassificationCode* the UN/SPSC (version 7.0401) is specified as the classification scheme. The actual UN/SPSC code is for wine is "50202203".

4.2. Complex item identification and item description

In order to provide the catalogue user with a better basis for searching and comparing the items in a catalogue, the catalogue provider may supply more fields for describing items.

The following example shows a catalogue line for a Nokia ABC mobile phone.

The catalogue line is related to a headset (an accessory to the mobile phone) under *AccessoryRelatedItem*. It also specifies that a 6 month subscription must be bought along with the mobile phone as a *RequiredRelatedItem*.

```
<Catalogue>
...
<cac:CatalogueLine>
  <cbc:ID>45656787-87067606</cbc:ID>
  <cbc:ActionCode listAgencyID="320" listID="urn:oiubl:codelist:catalogueactioncode-1.1">Add</cbc:ActionCode>
  <cbc:OrderableIndicator>true</cbc:OrderableIndicator>
  <cbc:OrderableUnit>EA</cbc:OrderableUnit>
  <cbc:ContentUnitQuantity unitCode="EA">1</cbc:ContentUnitQuantity>
  <cbc:WarrantyInformation>12 months warranty from purchase date</cbc:WarrantyInformation>
  <cac:LineValidityPeriod>
    <cbc:StartDate>2006-08-01</cbc:StartDate>
    <cbc:EndDate>2007-03-31</cbc:EndDate>
  </cac:LineValidityPeriod>
  <cac:AccessoryRelatedItem>
    <cbc:ID>45656787-951951</cbc:ID>
    <cbc:Quantity unitCode="EA">1</cbc:Quantity>
    <cbc:Description>Headset</cbc:Description>
  </cac:AccessoryRelatedItem>
  <cac:RequiredRelatedItem>
    <cbc:ID>45656787-89561</cbc:ID>
    <cbc:Quantity unitCode="MON">6</cbc:Quantity>
    <cbc:Description>Subscription</cbc:Description>
  </cac:RequiredRelatedItem>
  <cac:RequiredItemLocationQuantity>
    <cbc:LeadTimeMeasure unitCode="DAY">3</cbc:LeadTimeMeasure>
  </cac:RequiredItemLocationQuantity>
  <cac:Price>
    <cbc:PriceAmount currencyID="DKK">849.00</cbc:PriceAmount>
    <cbc:BaseQuantity unitCode="EA">1</cbc:BaseQuantity>
  </cac:Price>
</cac:CatalogueLine>
</Catalogue>
```

```

    <cbc:OrderableUnitFactorRate>1</cbc:OrderableUnitFactorRate>
  </cac:Price>
  <cac:DeliveryUnit>
    <cbc:BatchQuantity unitCode="EA">1</cbc:BatchQuantity>
    <cbc:ConsumerUnitQuantity unitCode="EA">1</cbc:ConsumerUnitQuantity>
    <cbc:HazardousRiskIndicator>>false</cbc:HazardousRiskIndicator>
  </cac:DeliveryUnit>
  <cac:ApplicableTaxCategory/> <!--Bør være udfyldt i dokumentet-->
</cac:RequiredItemLocationQuantity>
<cac:Item>
  <cbc:Description>Nokia Mobile telephone - Type ABC, with 3 hours speak, 300 hours standby and MMS</cbc:Description>
  <cbc:PackQuantity unitCode="EA">1</cbc:PackQuantity>
  <cbc:PackSizeNumeric>1</cbc:PackSizeNumeric>
  <cbc:Name>Nokia ABC</cbc:Name>
  <cbc:Keyword>Mobile Phone</cbc:Keyword>
  <cbc:Keyword>Cell Phone</cbc:Keyword>
  <cbc:BrandName>Nokia</cbc:BrandName>
  <cbc:ModelName>ABC</cbc:ModelName>
  <cac:SellersItemIdentification>
    <cbc:ID>87067606</cbc:ID>
    <cbc:ExtendedID>87067606-SIL</cbc:ExtendedID>
    <cac:PhysicalAttribute>
      <cbc:AttributeID>Colour</cbc:AttributeID>
      <cbc:Description>Silver</cbc:Description>
    </cac:PhysicalAttribute>
    <cac:IssuerParty/>
  </cac:SellersItemIdentification>
  <cac:StandardItemIdentification>
    <cbc:ID schemeAgencyID="9" schemeID="GTIN">5791234567890</cbc:ID>
  </cac:StandardItemIdentification>
  <cac:ItemSpecificationDocumentReference>
    <cbc:ID>nokiaabc</cbc:ID>
    <cbc:DocumentTypeCode listAgencyID="320" listID="urn:oiubl:codelist:cataloguedocumenttypecode-1.2">PictureURL</cbc:DocumentTypeCode>
    <cac:Attachment>
      <cac:ExternalReference>
        <cbc:URI>http://www.teleeksperten.dk/nokiaabc.jpg</cbc:URI>
      </cac:ExternalReference>
    </cac:Attachment>
  </cac:ItemSpecificationDocumentReference>
  <cac:ItemSpecificationDocumentReference>
    <cbc:ID>nokiaabc_produktblad</cbc:ID>
    <cbc:DocumentTypeCode listAgencyID="320" listID="urn:oiubl:codelist:cataloguedocumenttypecode-1.2">ProductSheet</cbc:DocumentTypeCode>
    <cac:Attachment>

```

```

    <cac:ExternalReference>
      <cbc:URI>http://www.teleeksperten.dk/nokia_abc_produktblad.pdf</cbc:URI>
    </cac:ExternalReference>
  </cac:Attachment>
</cac:ItemSpecificationDocumentReference>
<cac:CommodityClassification>
  <cbc:ItemClassificationCode listVersionID="7.0401" listName="UNSPSC">43191501</cbc:ItemClassificationCode>
</cac:CommodityClassification>
<cac:AdditionalItemProperty>
  <cbc:Name>Weight</cbc:Name>
  <cbc:Value>103 g </cbc:Value>
  <cac:ItemPropertyGroup>
    <cbc:ID>ROOT</cbc:ID>
  </cac:ItemPropertyGroup>
</cac:AdditionalItemProperty>
<cac:AdditionalItemProperty>
  <cbc:Name>Display pixels</cbc:Name>
  <cbc:Value>128 x 160</cbc:Value>
  <cac:ItemPropertyGroup>
    <cbc:ID schemeVersionID="7.0401" schemeName="UNSPSC">43191501</cbc:ID>
    <cbc:Name>Mobile Phones</cbc:Name>
  </cac:ItemPropertyGroup>
</cac:AdditionalItemProperty>
</cac:Item>
</cac:CatalogueLine>
</Catalogue>

```

Figure 11: Example of an extended item description

In the Item class, the item is described by *Name*, *Description*, *BrandName*, *ModelName*, etc.

Keyword contains synonyms to assist users searches.

Further properties have been added using *AdditionalItemProperty*. "Weight" has been defined as a common property by specifying it's *ItemPropertyGroup/ID* as "ROOT". Also, "Display pixels" is defined as a category property relevant to the UN/SPSC category of "43191501" (Mobile Phones).

The *SellersItemIdentification/ID* contains the supplier's item number and an extended variant number is contained in *SellersItemIdentification/ExtendedID*. The supplier's attribute is defined as "Color" in the *SellersItemIdentification/PhysicalAttribute* element.

The GTIN number (EAN number) is given as the *StandardItemIdentification/ID*. The *schemeID* attribute identifies that this is a GTIN number.

The *ItemSpecificationDocumentReference* contains both a link to a graphical image on the supplier's website as well as a link to a product sheet (also an external document).

5. Relevant code lists

Code list:	Agency:	Urn:	Example value:
ProfileID	320	urn:oioubl:id:profileid-1.4	Catalogue-CatAdv-1.0
EndpointID	320	urn:oioubl:scheme:endpointid-1.3	GLN
PartyIdentification/ID	320	urn:oioubl:scheme:partyidentificationid-1.3	DK:CVR
AddressFormatCode	320	urn:oioubl:codelist:addressformatcode-1.1	StructuredLax
CurrencyCode	6	ISO 4217 Alpha	DKK, EUR
UnitOfMeasureCode	6	UN/ECE rec 20	PK, EA
PriceTypeCode	6	UN/ECE 5387	CAT
CatalogueDocTypeCode	320	urn:oioubl:codelist:cataloguedocumenttypecode-1.2	Picture, PictureURL

6. Terms and abbreviations

Listed below are the most important terms and abbreviations:

Term:	Explanation:
Document level	Elements at document level are found directly under the root element (the top element) in the XML structure. Elements at the document level apply to the whole document.
Line level	Elements at line level, unlike elements at the document level, only apply to a specific transaction line
Class	A class is a collection of elements. For example, the Price class contains elements such as PriceAmount, BaseQuantity, etc.
Element	An element is an information entity in an XML structure. For example, the PriceAmount is the element containing the price in an invoice line.
Attributes	In an XML element, it is possible to specify a property as an attribute, e. g. the attribute unitCode in which the unit for a quantity may be specified, as in the example: <code><cbc:BaseQuantity unitCode="BO">1</cbc:BaseQuantity></code> Attributterne benyttes også til at angive kodelister f.eks. <code>listID="urn:oioubl:codelist:addressformatcode-1.1"</code>
Common attributes	Common attributes are product properties that can be specified for all (or most) items across categories. E.g. has all items a "Description" and also "Brand" and "Model" are specified as common attributes in OIOUBL
Category attributes	Category attributes are product properties that only applies to a single category. E.g. the attribute "Colour" is not useful for alle types of items.