



Universal Business Language 1.0 Small Business Subset 1.0

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Abstract

This specification defines the Universal Business Language 1.0 Small Business Subset (version 1.0).

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1 Introduction

The needs of small businesses with regard to implementation of electronic trade have long been a challenge to standards bodies. It was hoped that changes to the format of document and data exchange might provide what is required to allow greater interoperability beyond single businesses and their trading partners. In particular, the popularity of the Extensible Markup Language (XML) [\[XML\]](#) has heightened this hope.

However, problems arose with the growing multiplicity of different XML document formats and vocabularies. The Universal Business Language (UBL) [\[UBL\]](#) was developed as a central hub vocabulary to which other formats can be mapped.

A significant goal of UBL was to reduce the cost of its implementation to that which is affordable by even relatively small businesses. However, the size and complexity of the business documents provided by UBL has been cited as a possible barrier to this kind of adoption. To address this concern, the UBL TC has chartered the Small Business Subcommittee (SBSC) to create a commercially acceptable minimal subset of UBL tailored to the needs of small businesses and designed to be as easy as possible to implement.

The aim of the UBL Small Business Subset (SBS) is to identify those elements of each UBL document model that should be included in small business implementations. Specification of this subset also indicates to businesses implementing complete UBL documents the minimal components required by a small business. To allow trading parties to unambiguously state adherence to the subset where one or more of the partners does not wish to use a full implementation of UBL, this specification provides references (in the form of URNs) that can be included in trading partner agreements.

The keywords MUST, MUST NOT, REQUIRED, SHALL, SHALL NOT, SHOULD, SHOULD NOT, RECOMMENDED, MAY and OPTIONAL, when they appear in this document, are to be interpreted as described in [\[RFC2119\]](#).

2 Intended Use of the Small Business Subset

It is intended that any party wishing to limit their own UBL implementation to the Small Business Subset (SBS) should indicate this in their trading partner agreements (or the equivalent) with the relevant UBL schema namespace and URL and with the URN and URL associated with the respective Small Business Subset definition document. The subset URN is that given in the relevant subset definition as specified in the normative material in [section 3.1](#). The subset URL used should be the persistent URL provided with this documentation. Another persistent URL may be used such as those intended to assist in automation of the trading partner discovery process or composition of business documents as defined in a business process.

When a business process is used in conjunction with the Small Business Subset (such as OASIS ebXML Business Process Specification Schema or ebBP), the logical business document and business rules may be specified to enable their use, as in the following example:

...

```
<BusinessDocument name="UBL 1.0 Invoice - Small Business Subset" nameID="UBL-1.0-SBS-1.0-Invoice" >
```

```
<Documentation>The documents are an XSD file and a subset definition that specify the rules for creating the XML document for the business action of invoicing the buyer.
```

```
</Documentation>
```

```
<Specification
```

```
targetNamespace="urn:oasis:names:specification:ubl:schema:xsd:Invoice-1.0"
```

```
name="Invoice" nameID="Invoice" location="http://docs.oasis-open.org/ubl/cd-UBL-1.0/xsd/maindoc/UBL-Invoice-1.0.xsd" type="schema" />
```

```
<Specification externalDocumentDefRef="urn:oasis:names:tc:ubl:xpath:Invoice-1.0:sbs-1.0"
```

```
name="Invoice SBS" nameID="InvoiceSBS" location="http://docs.oasis-open.org/ubl/cs-UBL-1.0-SBS-1.0/xpaths/xml/XPath/Invoice-XPath.xml" type="other" />
```

```
</BusinessDocument>
```

...

A specification with a section like this may then be referenced in collaboration protocol profiles and agreements and in other trading partner agreements.

A complete set of ebXML Business Process (ebBP 2.0) definitions for the business context of

Procurement for use with UBL 1.0 (both definitions with and definitions without the Small Business Subset) is provided here in the [universal-business-process-1.0-ebBP/](#) directory and called '**Universal Business Process 1.0 Part 1: ebBP**'. A corresponding set of ebXML Collaboration Protocol Agreement (ebCPPA 2.0b) templates has been produced and can be found in the [universal-business-process-1.0-ebCPPA/](#) directory and is called '**Universal Business Process 1.0 Part 2: ebCPPA**'.

HINT: Systems required to support receipt of UBL SBS documents might be designed to process data external to the documents as exceptions, say, requiring human intervention.

An additional use of the Small Business Subset is as a specification for software development. Software providers may wish to begin UBL support by implementing the SBS rather than the full set of UBL document models. This reduces the initial size of a development project yet still supports interoperability between smaller businesses. Extension of software to support a full UBL implementation will then be possible at a later stage.

2.1 Normative Business Rules

Unless otherwise specified in a trading partner agreement, the default use of a UBL 1.0 Small Business Subset MUST be in accordance with the following two business rules:

2.1.1 UBL 1.0 SBS Business Rule 1.

Parties sending UBL documents to parties specified as receivers of a UBL 1.0 Small Business Subset (SBS) document or documents SHOULD NOT require the same receiving party to process any part of the UBL document which is external to the specified SBS.

This does not mean that business data external to the subset cannot be included in a message. It does mean that business data external to the subset MAY be ignored by the party receiving the document.

2.1.2 UBL 1.0 SBS Business Rule 2.

Parties specified as receivers of a UBL 1.0 Small Business Subset (SBS) document or documents SHOULD ensure that their systems appropriately process at least every document part that is specified in the SBS.

Extensions to these default rules MAY be made and specified in trading partner agreements. For example it might be that in a particular collaboration certain business components should be processed in addition to those identified in the SBS.

3 Package Contents

3.1 Normative Material

For each of the eight UBL 1.0 document types the normative definition of the Small Business Subset is specified in an XML document that summarizes all the possible elements and attributes that can validly appear in instances of that document.

These files are located in the <http://docs.oasis-open.org/ubl/cs-UBL-1.0-SBS->

1.0/xpaths/xml/XPath/ directory of this package, as listed below.

Order

[xpath.xml/XPath/Order-XPath.xml](#)

Order Response

[xpath.xml/XPath/OrderResponse-XPath.xml](#)

Order Response Simple

[xpath.xml/XPath/OrderResponseSimple-XPath.xml](#)

Order Change

[xpath.xml/XPath/OrderChange-XPath.xml](#)

Order Cancellation

[xpath.xml/XPath/OrderCancellation-XPath.xml](#)

Despatch Advice

[xpath.xml/XPath/DespatchAdvice-XPath.xml](#)

Receipt Advice

[xpath.xml/XPath/ReceiptAdvice-XPath.xml](#)

Invoice

[xpath.xml/XPath/Invoice-XPath.xml](#)

The files provided in this package are the only normative representation of the UBL 1.0 Small Business Subset.

Each of these document subset definition files contains its own Uniform Resource Name (URN). The URN is located in the subset definition file in the contents of the attribute named "id" of the root element named "xpath".

These URNs should be used as formal identifiers of the SBS version of the appropriate document in a trading partner agreement and business process specification. Typically this would be in addition to the corresponding (and unchanging by this specification) use of the standard UBL namespaces for the purposes of the XML namespace of the UBL vocabulary in instances.

In the same directory is a Compact RelaxNG (RNC) schema [\[RNC\]](#), "[xpath.rnc](#)", and an XSD schema [\[XSD1\]](#) [\[XSD2\]](#), "[xpath.xsd](#)". These schemas define the structure of the subset definition files. The subset definition files effectively contain the equivalent of XPaths [\[XPATH\]](#) for all subset elements and attributes. Actual XPath strings can easily be produced from these files by running a stylesheet such as the sample "[xpath.xsl](#)" XSLT 1.0 stylesheet provided in the same directory.

3.2 Non-Normative Material

Files in this package other than those described in the section "Normative Material" are provided for informative purposes only and should not be considered normative.

A complete set of ebXML Business Process (ebBP 2.0) definitions for the business context of Procurement for use with UBL 1.0 (both definitions with and definitions without the Small Business Subset) is provided here in the [universal-business-process-1.0-ebBP/](#) directory and called '**Universal Business Process 1.0 Part 1: ebBP**'. A corresponding set of ebXML Collaboration Protocol Agreement (ebCPPA 2.0b) templates has been produced and can be found in the [universal-business-process-1.0-ebCPPA/](#) directory and is called '**Universal Business Process 1.0 Part 2: ebCPPA**'.

A model file is provided in a format similar to the data model spreadsheets in the UBL 1.0 Standard, with an extra column for each subset document, in which "Y" indicates that the corresponding UBL Business Information Entity (BIE) is included in the Small Business Subset. This spreadsheet is located in the [model/](#) subdirectory.

A further set of UML model diagrams identify the elements and datatypes which are included in the subset. These diagrams are located in the [uml/](#) directory.

The subdirectory named [UBL-1-0-Schema-aligned-CCTS-spreadsheets/](#) contains UBL 1.0 aligned CCTS datatype spreadsheets to complete the model for those who might wish to generate other subset artifacts from the spreadsheets.

Valid UBL example instances of each UBL 1.0 document type conforming to the Small Business Subset with simulated content are provided in the directory `xml/filled-examples/`. These are provided both with fully qualified URLs (located in the directory [xml/filled-examples/with-urls/](#)) and with the names of the XSD schema files only (located in the directory [xml/filled-examples/without-urls/](#)).

Valid UBL example instances of each UBL 1.0 document type conforming to every attribute and element of the Small Business Subset but with generated data are provided in the directory `xml-generated/filled-examples/`. These are provided both with fully qualified URLs (located in the directory [xml-generated/filled-examples/with-urls/](#)) and with the names of the XSD schema files only (located in the directory [xml-generated/filled-examples/without-urls/](#)).

Again for information only, template instances of UBL documents conforming to every attribute and element of the Small Business Subset but empty of data (except for minimal data needed to parse) and therefore not truly conformant as UBL instances are located in the directories [xml-generated/empty-templates/with-urls/](#) and [xml-generated/empty-templates/without-urls/](#). (Care should be taken to change the minimal data accordingly if these templates are used to create actual instances.)

Finally, this package contains XML synthesized instances, HTML files, and text files which each contain a list of all possible XPath addresses that are valid for instances of a particular document model. These are located in the `xpaths/` directory, which is subdivided into [xpaths/xml/instance/](#) for XML synthesized instances, [xpaths/html/](#) for HTML listings of the subset XPaths, and [xpaths/text/](#) for text listings of the subset XPaths.

Users of UBL-1.0-SBS-1.0 can choose to use any expression of constraints they wish to specify the subset profile as a supplement to the official UBL schemas.

The HTML and text XPath files list the XPath addresses and cardinalities of all elements and attributes in the SBS. Element paths without a trailing "/" character indicate an element with text content; element paths with a trailing "/" character are "branches" with element content, indicating that the XPath expression is incomplete.

The XML XPath files contain the raw information from which the other files are generated. Two expressions of constraints are included: the normative RNG expression and the informative XSD expression. The XSD expression lacks some co-occurrence constraints that are indicated in the RNG expression.

If you need to just copy and paste the XPath address, then use the text files, as the HTML files include Unicode zero-width-space characters after each "/" to promote sensible line-breaks in narrow presentations. The HTML files are commented with some rendering troubleshooting guidelines.

The namespace prefixes adopted for documentary purposes in these files are interpreted as follows

(note that there is no obligation to use these prefixes in UBL documents):

`xmlns:cac="urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-1.0"`

`xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-1.0"`

`xmlns:co="urn:oasis:names:specification:ubl:schema:xsd:OrderChange-1.0"`

`xmlns:da="urn:oasis:names:specification:ubl:schema:xsd:DespatchAdvice-1.0"`

`xmlns:in="urn:oasis:names:specification:ubl:schema:xsd:Invoice-1.0"`

`xmlns:po="urn:oasis:names:specification:ubl:schema:xsd:Order-1.0"`

`xmlns:ra="urn:oasis:names:specification:ubl:schema:xsd:ReceiptAdvice-1.0"`

`xmlns:ro="urn:oasis:names:specification:ubl:schema:xsd:OrderResponse-1.0"`

`xmlns:rs="urn:oasis:names:specification:ubl:schema:xsd:OrderResponseSimple-1.0"`

`xmlns:xo="urn:oasis:names:specification:ubl:schema:xsd:OrderCancellation-1.0"`

3.2.1 NOTE

It is not the role of these XPath expressions to change any normative specification or schema of UBL 1.0. They merely summarize those components of UBL 1.0 that make up UBL-1.0-SBS. Any instances conforming to the SBS profile will validate against official UBL 1.0 W3C schemas, so there is no need for a new expression of the UBL schemas.

4 Normative References

[RNC] RELAX NG Compact Syntax

<http://www.oasis-open.org/committees/relax-ng/compact-20021121.html>

[RFC2119] Key words for use in RFCs to Indicate Requirement Levels

<http://www.faqs.org/rfcs/rfc2119.html>

<http://www.oasis-open.org/committees/download.php/6244/rfc2119.txt.pdf>

[UBL] Universal Business Language 1.0

<http://docs.oasis-open.org/ubl/cd-UBL-1.0/>

[RFC2119] Key words for use in RFCs to Indicate Requirement Levels

<http://www.faqs.org/rfcs/rfc2119.html>

<http://www.oasis-open.org/committees/download.php/6244/rfc2119.txt.pdf>

[XML] Extensible Markup Language (XML) 1.0 (Second Edition), W3C Recommendation 6 October 2000

<http://www.w3.org/TR/2000/REC-xml-20001006>

<http://www.oasis-open.org/committees/download.php/6241/REC-xml-20001006.pdf>

[XPath] XML Path Language (XPath) Version 1.0

<http://www.w3.org/TR/xpath>

<http://www.oasis-open.org/committees/xslt/xpath-19991116-addr-persist.html>

[XSD1] XML Schema Part 1: Structures, W3C Recommendation 2 May 2001

<http://www.w3.org/TR/xmlschema-1/>

<http://www.oasis-open.org/committees/download.php/6248/xsd1.html>

[XSD2] XML Schema Part 2: Datatypes, W3C Recommendation 2 May 2001

<http://www.w3.org/TR/xmlschema-2/>

<http://www.oasis-open.org/committees/download.php/6247/xsd2.html>

5 Notices

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