
**Information technology — Universal
Business Language Version 2.1
(UBL v2.1)**

*Technologie de l'information — Langage d'affaire universel version
2.1 (UBL v2.1)*



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 urn:oasis:names:specification:ubl:schema:xsd:UnawardedNotification-2
 urn:oasis:names:specification:ubl:schema:xsd:UtilityStatement-2
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Abstract:

This specification defines the Universal Business Language, version 2.1.

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1 Introduction

Since its approval as a W3C recommendation in 1998, XML has been adopted in a number of industries as a framework for the definition of the messages exchanged in electronic commerce. The widespread use of XML has led to the development of multiple industry-specific XML versions of such basic documents as purchase orders, shipping notices, and invoices.

While industry-specific data formats have the advantage of maximal optimization for their business context, the existence of different formats to accomplish the same purpose in different business domains is attended by a number of significant disadvantages as well.

- Developing and maintaining multiple versions of common business documents like purchase orders and invoices is a major duplication of effort.
- Creating and maintaining multiple adapters to enable trading relationships across domain boundaries is an even greater effort.
- The existence of multiple XML formats makes it much harder to integrate XML business messages with back-office systems.
- The need to support an arbitrary number of XML formats makes tools more expensive and trained workers harder to find.

The OASIS Universal Business Language (UBL) is intended to help solve these problems by defining a generic XML interchange format for business documents that can be restricted or extended to meet the requirements of particular industries. Specifically, UBL provides the following:

- A suite of structured business objects and their associated semantics expressed as reusable data components and common business documents.
- A library of XML schemas for reusable data components such as “Address”, “Item”, and “Payment”—the common data elements of everyday business documents.
- A set of XML schemas for common business documents such as “Order”, “Despatch Advice”, and “Invoice” that are constructed from the UBL library components and can be used in generic procurement and transportation contexts.

A standard basis for XML business schemas provides the following advantages:

- Lower cost of integration, both among and within enterprises, through the reuse of common data structures.
- Lower cost of commercial software, because software written to process a given XML tag set is much easier to develop than software that can handle an unlimited number of tag sets.
- An easier learning curve, because users need master just a single library.
- Lower cost of entry and therefore quicker adoption by small and medium-size enterprises (SMEs).
- Standardized training, resulting in many skilled workers.
- A universally available pool of system integrators.
- Standardized, inexpensive data input and output tools.
- A standard target for inexpensive off-the-shelf business software.

UBL is designed to provide a universally understood and recognized syntax for legally binding business documents and to operate within a standard business framework such as ISO 15000 (ebXML) to provide

a complete, standards-based infrastructure that can extend the benefits of existing EDI systems to businesses of all sizes. UBL is freely available to everyone without legal encumbrance or licensing fees.

UBL schemas are modular, reusable, and extensible in XML-aware ways. As the first standard implementation of ebXML Core Components Technical Specification 2.01, the UBL Library is based on a conceptual model of information components known as Business Information Entities (BIEs). These components are assembled into specific document models such as [Order](#) and [Invoice](#). These document models are then transformed in accordance with UBL Naming and Design Rules into W3C XSD schema syntax. This approach facilitates the creation of UBL-based document types beyond those specified in this release.

UBL can also be regarded as a generic Open-edi Configuration in the perspective of the Open-edi Reference Model (ISO/IEC 14662:2010). This is described in more detail in [Appendix H, The Open-edi reference model perspective of UBL \(Non-Normative\)](#).

1.1 Terminology

1.1.1 Terms and Definitions

ASiC-S

Associated Signature Container (simple form). A standard container that associates a single data object with one or more detached signature(s) that apply to it. See [\[ASiC\]](#).

Digital Signature

A value generated from the application of a private key to a message via a cryptographic algorithm such that it has the properties of integrity and message authentication and/or signer authentication. A signature may be (non-exclusively) described as detached, enveloping, or enveloped ([\[xmldsig\]](#), with modifications).

Document

A set of information components that are exchanged as part of a business transaction; for example, in placing an order.

Transform

The processing of data from its source to its derived form. Typical transforms include XML Canonicalization [\[XML C14N\]](#) and XSLT [\[XSLT 2.0\]](#).

XSD schema

An XML document definition conforming to the W3C XML Schema language [\[XSD1\]](#)[\[XSD2\]](#).

The terms *Core Component (CC)*, *Basic Core Component (BCC)*, *Aggregate Core Component (ACC)*, *Association Core Component (ASCC)*, *Business Information Entity (BIE)*, *Basic Business Information Entity (BBIE)*, and *Aggregate Business Information Entity (ABIE)* are used in this specification with the meanings given in [\[CCTS\]](#).

The terms *Object Class*, *Property Term*, *Representation Term*, and *Qualifier* are used in this specification with the meanings given in [\[ISO11179\]](#).

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 [\[RFC2119\]](#).

1.1.2 Symbols and Abbreviations

ABIE

Aggregate Business Information Entity

AdES

Advanced Electronic Signature

ASBIE

Association Business Information Entity

BBIE

Basic Business Information Entity

BIE

Business Information Entity

C14N

Canonicalization

CC

Core Component

CPFRCollaborative Planning, Forecasting, and Replenishment [[CPFR](#)]**CV2**

Credit Card Verification Numbering System

DSig

Digital Signature

EDI

Electronic Data Interchange

ISO

International Organization for Standardization

NDR

UBL Naming and Design Rules

QC

Qualified Certificate

QS

Qualified Signature

UMLUnified Modeling Language [[UML](#)]**UN/CEFACT**

United Nations Centre for Trade Facilitation and Electronic Business

UNDG

United Nations Dangerous Goods

URI

Uniform Resource Identifier

UUID

Universally Unique Identifier

XAdESXML Advanced Electronic Signatures [[XAdES](#)]

XML

Extensible Markup Language [[XML](#)]

XMLDSig

XML Digital Signature [[xmldsig](#)]

XPath

The XML Path Language

XSD

W3C XML Schema Language [[XSD1](#)][[XSD2](#)]

XSLT

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