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**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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# Universal Business Language Version 2.1

## OASIS Standard

04 November 2013

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urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-2  
urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2  
urn:oasis:names:specification:ubl:schema:xsd:CommonExtensionComponents-2  
urn:oasis:names:specification:ubl:schema:xsd:CommonSignatureComponents-2  
urn:oasis:names:specification:ubl:schema:xsd:QualifiedDataTypes-2  
urn:oasis:names:specification:ubl:schema:xsd:SignatureAggregateComponents-2  
urn:oasis:names:specification:ubl:schema:xsd:SignatureBasicComponents-2  
urn:oasis:names:specification:ubl:schema:xsd:UnqualifiedDataTypes-2

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urn:oasis:names:specification:ubl:schema:xsd:PackingList-2  
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urn:oasis:names:specification:ubl:schema:xsd:ProductActivity-2  
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urn:oasis:names:specification:ubl:schema:xsd:TransportServiceDescription-2  
urn:oasis:names:specification:ubl:schema:xsd:TransportServiceDescriptionRequest-2  
urn:oasis:names:specification:ubl:schema:xsd:UnawardedNotification-2  
urn:oasis:names:specification:ubl:schema:xsd:UtilityStatement-2  
urn:oasis:names:specification:ubl:schema:xsd:Waybill-2

**Abstract:**

This specification defines the Universal Business Language, version 2.1.

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## Table of Contents

1 Introduction .....	9
1.1 Terminology .....	10
1.1.1 Terms and Definitions .....	10
1.1.2 Symbols and Abbreviations .....	10
1.2 Normative References .....	12
1.3 Non-Normative References .....	13
2 UBL 2.1 Business Objects .....	15
2.1 General Business Rules .....	16
2.1.1 Items .....	16
2.1.2 Item Identification .....	16
2.1.3 Item Instances .....	17
2.1.4 Item Pricing .....	17
2.1.5 Hazardous Items .....	17
2.1.6 Parties .....	17
2.1.7 Multilingual Text .....	17
2.1.8 Taxation Rules .....	17
2.1.9 Item vs. Line Item .....	17
2.1.10 Shipment vs. Consignment .....	18
2.1.11 Transport vs. Transportation .....	21
2.1.12 Financial Information .....	22
2.1.13 Indirect Taxes .....	22
2.2 Overview of Business Processes .....	22
2.3 Tendering .....	23
2.3.1 Contract Information Preparation .....	23
2.3.2 Contract Information Notification .....	25
2.3.3 Invitation to Tender .....	26
2.3.4 Submission of Qualification Information .....	27
2.3.5 Submission of Tenders .....	28
2.3.6 Awarding of Tenders .....	29
2.4 Catalogue .....	31
2.4.1 Catalogue Business Rules .....	31
2.4.2 Catalogue Provision .....	32
2.5 Quotation .....	38
2.6 Ordering .....	39
2.6.1 Ordering Business Rules .....	39
2.6.2 Order Response Simple .....	40
2.6.3 Order Response .....	40
2.6.4 Order Change .....	40
2.6.5 Order Cancellation .....	40
2.7 Fulfilment .....	41
2.7.1 Despatch Advice Business Rules .....	41
2.7.2 Receipt Advice Business Rules .....	42
2.7.3 Fulfilment Cancellation Business Rules .....	43
2.8 Billing .....	43
2.8.1 Billing Business Rules .....	43
2.8.2 Traditional Billing .....	44
2.8.3 Self Billing .....	46
2.8.4 Reminder for Payment .....	48
2.9 Freight Billing .....	48
2.10 Utility Billing .....	49
2.11 Payment Notification .....	50
2.12 Report State of Accounts .....	50
2.13 Collaborative Planning, Forecasting, and Replenishment .....	51
2.13.1 Collaboration Agreement and Joint Business Planning .....	51
2.13.2 Sales Forecast Generation and Exception Handling .....	54



2.13.3 Order Forecast Generation and Exception Handling .....	57
2.14 Vendor Managed Inventory .....	61
2.14.1 Basic Vendor Managed Inventory .....	61
2.14.2 Cyclic Replenishment Program (CRP) .....	68
2.14.3 Replenishment On Customer Demand .....	71
2.15 International Freight Management .....	75
2.15.1 Forwarding Instructions .....	76
2.15.2 Packing List .....	76
2.15.3 Bill of Lading .....	76
2.15.4 Waybill .....	77
2.16 Freight Status Reporting .....	77
2.17 Certification of Origin of Goods .....	78
2.18 Intermodal Freight Management .....	79
2.18.1 Announcing Intermodal Transport Services .....	82
2.18.2 Establishing a Transport Execution Plan .....	82
2.18.3 Providing an Itinerary for a Transport Service .....	84
2.18.4 Reporting Transport Means Progress Status .....	85
2.19 Party Roles .....	86
3 UBL 2.1 Schemas .....	91
3.1 UBL 2.1 Document Schemas .....	91
3.1.1 Application Response .....	91
3.1.2 Attached Document .....	91
3.1.3 Awarded Notification .....	92
3.1.4 Bill of Lading .....	92
3.1.5 Call for Tenders .....	92
3.1.6 Catalogue .....	93
3.1.7 Catalogue Deletion .....	93
3.1.8 Catalogue Item Specification Update .....	93
3.1.9 Catalogue Pricing Update .....	94
3.1.10 Catalogue Request .....	94
3.1.11 Certificate of Origin .....	94
3.1.12 Contract Award Notice .....	95
3.1.13 Contract Notice .....	95
3.1.14 Credit Note .....	95
3.1.15 Debit Note .....	96
3.1.16 Despatch Advice .....	96
3.1.17 Document Status .....	97
3.1.18 Document Status Request .....	97
3.1.19 Exception Criteria .....	97
3.1.20 Exception Notification .....	98
3.1.21 Forecast .....	98
3.1.22 Forecast Revision .....	98
3.1.23 Forwarding Instructions .....	99
3.1.24 Freight Invoice .....	99
3.1.25 Fulfilment Cancellation .....	99
3.1.26 Goods Item Itinerary .....	100
3.1.27 Guarantee Certificate .....	100
3.1.28 Instruction for Returns .....	100
3.1.29 Inventory Report .....	101
3.1.30 Invoice .....	101
3.1.31 Item Information Request .....	101
3.1.32 Order .....	102
3.1.33 Order Cancellation .....	102
3.1.34 Order Change .....	103
3.1.35 Order Response .....	103
3.1.36 Order Response Simple .....	103
3.1.37 Packing List .....	104
3.1.38 Prior Information Notice .....	104

3.1.39 Product Activity .....	104
3.1.40 Quotation .....	105
3.1.41 Receipt Advice .....	105
3.1.42 Reminder .....	105
3.1.43 Remittance Advice .....	106
3.1.44 Request for Quotation .....	106
3.1.45 Retail Event .....	107
3.1.46 Self Billed Credit Note .....	107
3.1.47 Self Billed Invoice .....	107
3.1.48 Statement .....	108
3.1.49 Stock Availability Report .....	108
3.1.50 Tender .....	108
3.1.51 Tender Receipt .....	109
3.1.52 Tenderer Qualification .....	109
3.1.53 Tenderer Qualification Response .....	109
3.1.54 Trade Item Location Profile .....	110
3.1.55 Transport Execution Plan .....	110
3.1.56 Transport Execution Plan Request .....	110
3.1.57 Transport Progress Status .....	111
3.1.58 Transport Progress Status Request .....	111
3.1.59 Transport Service Description .....	112
3.1.60 Transport Service Description Request .....	112
3.1.61 Transportation Status .....	112
3.1.62 Transportation Status Request .....	113
3.1.63 Unawarded Notification .....	113
3.1.64 Utility Statement .....	113
3.1.65 Waybill .....	114
3.2 UBL 2.1 Common Schemas .....	114
3.2.1 Reusable BIE Schemas .....	114
3.2.2 Reusable Data Type Schemas .....	115
3.2.3 Documentation Metadata Schema .....	115
3.2.4 Extension Content Schemas .....	116
3.2.5 Signature Extension Schemas .....	116
3.3 Schema Dependencies .....	118
3.4 Extension Validation Methodology .....	118
3.5 Notes for Extension Creators .....	119
4 Additional Document Constraints .....	120
4.1 Validation .....	120
4.2 Character Encoding .....	120
4.3 Empty Elements .....	121
4.4 Natural language text elements .....	121
5 UBL Digital Signatures .....	122
5.1 Introduction (Non-Normative) .....	122
5.1.1 XML Digital Signatures .....	122
5.2 Profiles for UBL Digital Signatures .....	125
5.2.1 Enveloped XML Signatures in UBL Documents .....	126
5.2.2 Detached XML Signatures for UBL Documents .....	127
5.3 UBL Extension for Enveloped XML Digital Signatures .....	128
5.3.1 Namespaces .....	129
5.3.2 Identification .....	129
5.3.3 Validation .....	130
5.3.4 Structure .....	130
5.3.5 Transformation .....	132
5.4 Digital Signature Examples .....	133
6 Conformance .....	135
6.1 Document and Schema Conformance .....	135
6.2 Digital Signature Conformance .....	135
6.2.1 XAdES Conformance .....	135

## Appendixes

A Release Notes (Non-Normative)	136
A.1 Availability	136
A.2 Status of this Release	136
A.3 Package Structure	136
A.4 Support	137
A.5 UBL Customization	137
A.6 Upgrading from UBL 2.0 to UBL 2.1	137
A.7 Dictionary Entry Name Corrections in UBL 2.1	137
B Revision History (Non-Normative)	139
B.1 UBL 1.0	139
B.2 Major Revision: UBL 2.0	139
B.3 Minor Revision: UBL 2.1	140
B.3.1 New Document Types in UBL 2.1	140
B.3.2 Financial Information Enhancements in UBL 2.1	140
B.3.3 Revised Approach to Data Definitions in UBL 2.1	141
B.3.4 Schema changes from UBL 2.0 XML to UBL 2.1 XML	142
B.3.4.1 Changes to Library Elements, UBL 2.0 to UBL 2.1	142
B.3.4.2 Changes to Document Elements, UBL 2.0 to UBL 2.1	159
B.3.4.3 Changes to Attributes, UBL 2.0 to UBL 2.1	166
C The UBL 2.1 Data Model (Non-Normative)	167
C.1 UBL 2.1 Schema Generation	167
C.2 The UBL Common Library	168
C.3 Business Information Entities	168
C.4 Navigating the UBL 2.1 Data Model Spreadsheets	170
C.5 Summary Reports	173
C.6 Business Information Entity Documentation	173
C.7 UML-Based View of the UBL Data Model	173
D Data Type Qualifications in UBL (Non-Normative)	174
E UBL 2.1 Code Lists and Two-phase Validation (Non-Normative)	178
E.1 Introduction	178
E.2 Default Validation Setup	178
E.3 Discussion of the Default Validation Test	179
E.4 Customizing the Default XSLT File	181
E.5 Sources for the Default Validation Framework	181
E.6 Code Lists Included in UBL 2.1	181
E.6.1 cl/gc/default	181
E.6.2 cl/gc/special-purpose	182
E.7 Code List Agency Identifiers	183
F UBL 2.1 Example Document Instances (Non-Normative)	185
G Alternative Representations of the UBL 2.1 Schemas (Non-Normative)	187
G.1 ASN.1 UBL 2.1 Specification	187
G.2 UBL 2.1 UML Diagrams	187
G.3 UBL 2.1 RELAX NG Schemas	187
H The Open-edi reference model perspective of UBL (Non-Normative)	188
I Acknowledgements (Non-Normative)	191

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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

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**AdES**

Advanced Electronic Signature

**ASBIE**

Association Business Information Entity

**BBIE**

Basic Business Information Entity

**BIE**

Business Information Entity

**C14N**

Canonicalization

**CC**

Core Component

**CPFR**

Collaborative 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

**UML**

Unified 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

**XAdES**

XML 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**Extensible Stylesheet Language Transformations (a transformation language) [[XSLT 2.0](#)]

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