

How to Use the EAN.UCC XML Schemas Version 1.0

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Table of Contents

1. What Is In This Release	4
1.1 Implementation Details	4
1.2 The Schema Organization	5
1.2.1 The Documents	6
1.2.2 The Physical Files	6

XML Architectural Standards

DOCUMENT HISTORY

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1. What Is In This Release

The EAN.UCC XML schema release is an organized suite of XML Schema Modules. The entire suite supports the following:

The AS2 message transport and routing protocol: This layer provides the message header, which contains the information for routing and transporting only.

The EAN.UCC Message Architecture: The message architecture layer combines the business documents for Data Alignment and Simpl-eb in one message transaction, allowing the sender to package one or more documents in a transmission. This reduces the transmission and handshaking costs incurred if one were to send a document at a time. It also supports the increased flexibility of sending one or many documents in one transmission, allowing the sender to mix and match the set of documents sent according to the individual transmission needs.

The despatch advice, item alignment, order, party alignment, business documents.

A common component library: The common components are of 2 types:

- The basic building blocks that provide the reusable common components (i.e. date, Quantity, MeasurementType).
- The Complex Core Components that define the lowest common denominator that is required in a core business document (i.e. the lowest common denominator of elements and attributes required in a Core Order).

1.1 Implementation Details

The World Wide Web Consortium (W3C) released XML Schema as a W3C Recommendation in three parts: [Part 0: Primer](#), [Part 1: Structures](#), [Part 2: Datatypes](#) on May 2, 2001. The schemas conform to and are implemented using this Recommendation.

The schemas have been implemented and tested using the following software:

Schema Quality Checker (SQC), v1.0.17, now checks Schemas compatible with the May 2 W3C XML Schema Recommendation specification from IBM alphaWorks.

XML Schema Validator (XSV) version: XSV 1.195/1.97 of 2001/06/09, an XML Schema Validator from University of Edinburgh/W3C.

1.2 The Schema Organization

The entire suite is organized as 3 distinct layers plus a common component library. The organization of the schemas supports future expansion. In later releases, there will be additional schemas available and these can be plugged into the other existing layers to expand the functionality of the schemas. Currently, Data Align and Simpl-eb functionality is supported.

Each of the layers:

- Performs its own function;
- Has a subroot. This subroot is the root of the set of schemas within that layer which can be validated with a validator tool if and only the entire set of schemas within that layer are present.
- All files need to present for the validation at each layer to be successful. All files starting with the top, envelope.xsd need to be present for the validation of the entire suite offering complete functionality to be successful.
- The subroot of each layer is an interface to the layer above.
- Each of the layers includes files which are of the same namespace and imports files which have different namespaces.
- Namespaces allow extensions to occur upon data structures without naming collisions. Collisions would otherwise occur when one business document had to include multiple extensions (i.e. in the future fmcg and furniture extensions to the core may be incorporated in one Order).

The entire release has its root in the <envelope> tag which is contained in the Envelope.xsd. This file must be imported into the validator tool to get the full set of functionality including transport and routing, messaging, and business documents.

1.2.1 The Documents

The documents support the fast moving consumer goods (fmcg) Simpl-eB Business Scenario (FCMG). Each Document is comprised of:

- Core
- Extensions (Specialized for FMCG).

The architecture allows other Extensions to be built reusing the existing core files in the future without changing anything in the core or other layers.

1.2.2 The Physical Files

The set of physical files that make up the complete functionality is:

At the envelope layer:

- Envelope.xsd – this is the top or root file and this root contains all the sub-roots and elements in the suite. It is also the root of the AS2 namespace. All the files in this layer must be present for a successful validation.
- Imports
- Core.xsd
- Message.xsd

At the message layer:

- Message.xsd – This is a sub-root that is also the root of the message layer. It contains all the elements in this layer. It is the root of the msg namespace. All the files in this layer must be present for a successful validation of this layer. All the files in the suite must be present for a successful validation of the entire set of functionality.
- *Imports:*
 - **Core.xsd**

Includes:

- **Document.xsd**
- **Command.xsd**
 - *Includes:*

- DocumentCommand.xsd
- LinkCommand.xsd
- DocumentIdentificationCommand.xsd

At the document layer:

Document.xsd – This is an interface between the document and message layer. It imports all the root namespaces for the documents into the message layer. It imports the root of the fmcg and simpl-eb namespaces. All the files in this layer must be present for a successful validation of the simpl-eb and fmcg extended documents. (In order to validate only the simpl-eb, the fmcg files do not need to be present. The reverse is also true.) This file provides the single interface point into the next architectural layer.

- *Imports:*
 - **FMCG.xsd**
 - *Imports:*
 - **Core.xsd**
 - *Includes:*
 - **FMCGDespatchAdvice.xsd**
 - **FMCGIdentifiers.xsd**
 - **FMCGItem.xsd**
 - **FMCGOrder.xsd**
 - **FMCGSimpleInvoice.xsd**
- **Simple-eb.xsd**
 - *Imports:*
 - **Core.xsd**
 - *Includes*
 - **Simple-ebParty.xsd**
- *In the component library:*

- **Core.xsd** – this is a sub-root that is also the root of the component library layer. It contains all the elements in this layer. It is the root of the core namespace.
 - *Includes*
 - **AllowanceOrCharge.xsd**
 - **DespatchAdvice.xsd**
 - **Item.xsd**
 - **Order.xsd**
 - **PaymentTerms.xsd**
 - **RequestForPayment.xsd**
 - **SimpleInvoice.xsd**
 - **Common.xsd**
 - *Includes:*
 - **Components.xsd**
 - **Identifiers.xsd**
 - **Types.xsd**

For further details please reference the Appendix 2: EAN.UCC XML Architectural Guide Version 1.0 July 2001.