

EAN.UCC XML
Business Message
Standard For
Performance History

Version 1.3

July 2003



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Purpose

The purpose of this Business Message Standard is to provide the necessary information to implement this message as part of the EAN.UCC System. The information contained within this document is a direct result of the work conducted by the EAN.UCC's Plan Business Requirements Group.

The content of this document is actually a collection of material from several different sources to create a single source of information that will provide the necessary basics to understand and implement this EAN.UCC Business Message Standard. The core of this document originates from the Business Requirements Document that is created by the Business Requirements Groups to define the business needs that are to be addressed by this Message. The document then provides the technical details needed to implement the message: a report from the Global Data Dictionary, StyleSheet and Instance File.

This Business Message Standard is meant to be used in conjunction with the EAN.UCC XML Schemas that are available on the EAN and UCC websites. The implementer of these standards needs to be aware of the interrelationship amongst the XML Schemas and the importance of using only interoperable versions.

The reader will notice as they progress through this document that there are several different 'levels' of information that is presented. We begin with the business rationale for the message and then move into the technical details of how and what is needed to exchange this message. This design is deliberate to reach the broadest audience and to meet their needs. Based upon the reader's experience and intentions, specific sections of this document may be more valuable than others. This design and content of this document is based upon the direct feedback from our user community and as such, we are constantly revising and refining how and what we present.

Background

EAN.UCC Business Message Standard:	Performance History	
Business Requirement Group:	Plan	
Business Requirement Document:	Performance History	
Business Requirements Group Manager:	Andrew Hearn	Uniform Code Council
Global Data Dictionary:	EAN.UCC Global Data Dictionary v1.3	
Schemas:	EAN.UCC Schemas v1.3	
Schemas have been tested on Parser(s) and Version(s):	XML Spy Version 4.4 , Xerces , XSV	

Business Requirements Group (BRG)

Business Requirements Document For

PERFORMANCE HISTORY

Version 0.1.2
June 30, 2003

DOCUMENT HISTORY

Document Number:	XXX-YYY-NNN
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Document Summary

Document Title	EAN•UCC – Business Requirements Document For Performance History
Owner	Andrew Hearn – ahearn@uc-council.org
Abstract	
Status	ITRG Approved

Document Change History Log

Date of Change	Ver	Reason for Change	Summary of Change	CCR #
September 25, 2001	0.0.0	Split from BRD for product activity & performance history		
October 26, 2001	0.1.0	Incorporate ITAG and EAN comments	Deleted date in footer. Revised 1.0, 1.1.2, 1.2 and added note to 5.0	
March 25, 2003	0.1.1	Harmonisation version 1.3		
June 30, 2003	0.1.2	Incorporation of ITRG comments	Replaced class diagrams Performance History, Plan Common, Measurement	

Approvals

Title	Name	Signature	Date

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1.0 Introduction

Collaborative Planning Forecasting and Replenishment (CPFR®) is a well documented nine step process developed and maintained by the Voluntary Interindustry Commerce Standards Association (VICS) for use by trading partners.

Within the CPFR® process, performance history is one type of historical data that a pair of CPFR® trading partners (a buyer and a seller) can share. Performance History represents a collection of values gathered for key performance metrics in the trading partner relationship.

1.1 Overview – Performance History

Performance history captures key supply chain metrics. These metrics can include forecast accuracy, in-stock percentage, fill rate, days of supply, or on-time delivery percentage. Because many of these measures are ratios, they require a unit of measure to be meaningful.

1.1.1 Purpose

The purpose of this Business Requirements Document is to document a process-to-data approach. The Unified Modeling Language (UML) is used for notation. Processes are clearly understood because of the use of formal modeling with the UML models. Agreed to models permit the application of the data elements to support the processes. The biggest benefit of this process-to-data approach is the alignment of the model to fit the business need.

CPFR® is the registered trademark of VICS, the Voluntary Interindustry Commerce Standards Association

1.1.2 Audience

The audience for this document is anyone involved in collaborative planning, forecasting and replenishment.

To better understand this business requirements document the audience should become familiar with the VICS CPFR[®] Process, the VICS CPFR[®] XML Messaging Model, June 13, 2001 and VICS Collaborative Planning Forecasting and Replenishment (CPFR[®]), Global Commerce Initiative Recommendation, June 30, 2001 as these documents provide the basis and context of the business requirements.

1.1.3 Document Organization

This document has the following organization:

- Section 1 – Provides background information for this effort
- Section 2 – Describes the players and roles that will be referred to in this document (Actors)
- Section 3 – Describes the general business requirements that have been identified
- Section 4 – UML Model Information and Examples
 - High Level Class Diagram
- Section 5 – Global Data Dictionary

1.2 Background

The Performance History Business Requirements Document is the output of the VICS CPFR[®], GCI, the Plan BRG (Business Requirements Group) and EAN ECEG (Electronic Commerce Expert Group). It is the responsibility of the BRG's to provide the business requirements for the process of the creation and maintenance of the business and data models. The BRG's develop and maintain business process models and supporting Use Case diagrams, Class diagrams and data requirements for a specific business function in a global electronic commerce environment. The BRG's review and resolve change requests. The BRG's provide guidance for the technical application of new business processes and changes to existing business processes. Currently, BRG's exist for the following business processes: Align Data, Plan, Order, Despatch, Pay, After Sales Services, Asset Management, Manufacturing and Point Of Service. EAN (ECEG) covers similar functionality, through a pool of experts that liaises with the local users, ensuring the effective gathering of the business requirements from its network of national Member Organisations world-wide.

The following are the main documents used in developing this work.

EAN•UCC Global Business Model (Process and Data), "The Trade of Goods and Services", October 1999

VICS CPFR[®] XML Messaging Model, June 13, 2001

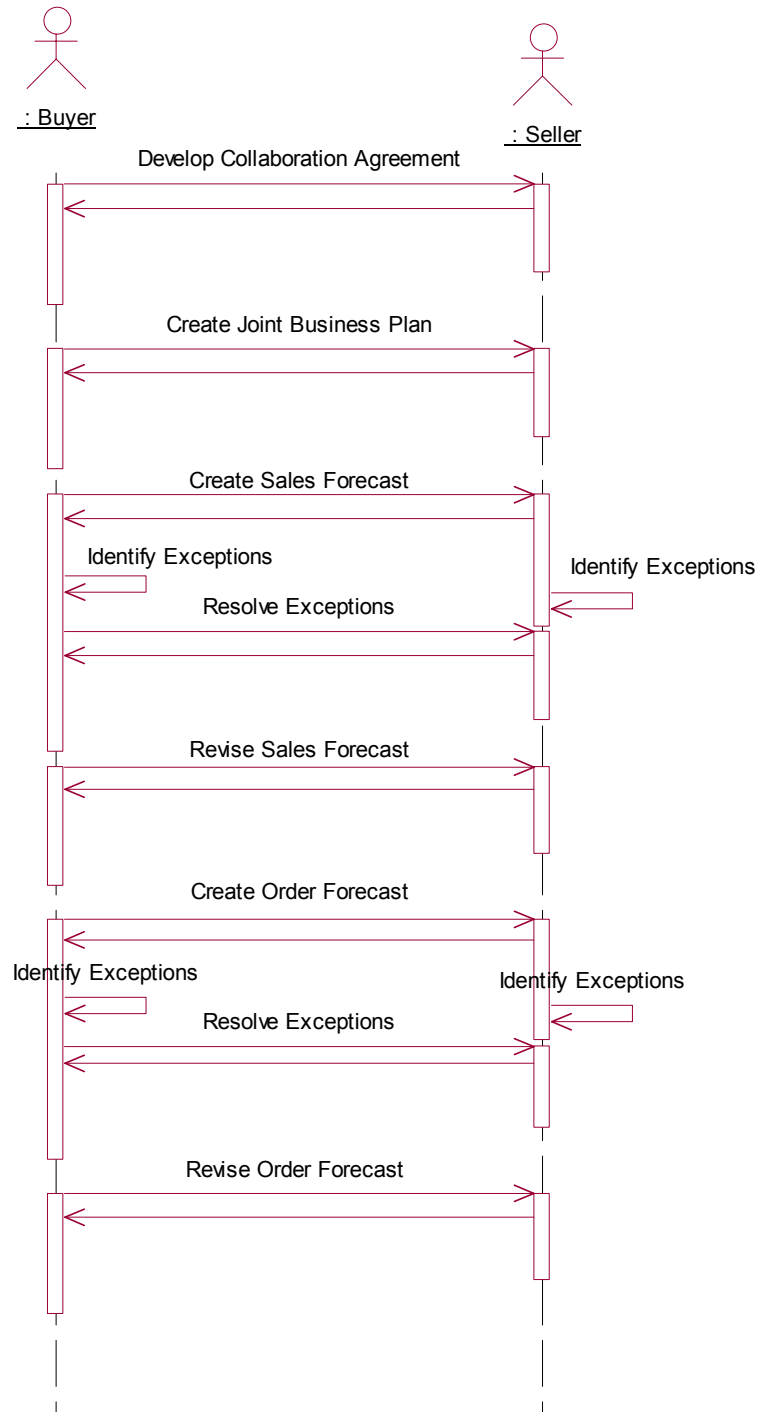
VICS Collaborative Planning Forecasting and Replenishment (CPFR[®]), Global Commerce Initiative Recommendation, June 30, 2001.

Acknowledgement is also due to the work going on in the XML environment.

ebXML/SOAP
eCo Framework (Common Business Library)
RosettaNet
UN/CEFACT EWG
W3C

2.0 Players and Roles

There is one pair of trading partners involved in Performance History, a “seller” and a “buyer”. The graphic flow below pictures the overall sequence of activities. Performance History falls within the exception activities.



3.0 Requirements

Exception criteria are rules that describe the thresholds for forecast variance, product activity, and performance history beyond which exceptions to sales forecasts and order forecasts are noted and resolved between a pair of trading partners.

3.1 General Requirements

Performance History is used for metric exceptions.

The collaboration for these exceptions and resolution to exceptions occurs between a pair of trading partners for a single location.

3.2 Performance History Use Case Scenario

3.2.1 Business Opportunities/Problem Statement

The objective is for a pair of trading partners to elaborate upon operational conditions and key metrics that would identify exceptions to sales and order forecasts.

3.2.2 Stakeholders: Actors

Performance History is a two-actor system involving a collaborative effort between a buyer and a seller for a single location. The lead actor in the collaboration depends upon the scenario most appropriate to the trading partner's business situation.

3.2.3 Process Start State

The start-state for Performance History begins with the receipt a forecast.

3.2.4 Process End State

The end-state for Performance History occurs with the resolution of exceptions.

3.2.5 Preconditions

A collaboration agreement and joint business plan must be in place and a forecast is prepared and received by the trading partners.

3.2.6 Successful End Condition

Exceptions, when identified, are noted and resolved.

3.2.7 Failed End Condition

Operational activities and key metrics identifying exceptions to forecasts are not identified and resolved.

3.2.8 Main Process Flow

1. Both trading partners establish exception criteria
2. Both trading partners establish the value limits set by the exception criteria
3. Upon receipt of a forecast (sales or order), the appropriate trading partner retrieves exception criteria data
4. If forecast is within the value limits, no exception occurs
5. If forecast is outside the value limits, an exception is identified and processed

This section refers to the high level class diagram for Performance History. The color coding on the diagram is as follows:

- Red indicates that the class is the root class for the diagram.
- Grey indicates that the class is outside of or external to the root class.
- Yellow indicates that the class pertains specifically to the root class.

4.0 High Level Diagram

4.1 Performance History

The Performance History based on agreed upon key metrics as an exception message for either a Sales Forecast and an Order Forecast from which the resolution will create a Forecast Revision. The Performance History classes are pictured and are listed here alphabetically. These include:

- [Measurement Value](#)
- [Metric Type Code List](#)
- [Performance Data Item](#)
- [Performance History](#)
- [Plan Document](#)
- [Time Series Data Item](#)

4.1.1 Measurement Value

This external class originates in Measurement and is a class that is used in more than one class diagram. This class has an attribute unit of measure and allows for the value of the measurement. There is multiple and numerous possible unit of measures. The EAN.UCC system refers to the UN/Cefact's UN/ECE Recommendation 20 list for the possible unit of measure. The unit of measure is not broken down into categories of UOM such as "Time UOM, Weight UOM, Dimensional UOM, or Net Content UOM". It's a list of all the possible units of measure.

4.1.2 Metric Type Code List

This external class originates in Plan Common and is a class that is used in more than one CPFR® class diagram. This class identifies the metric type code. The metric type code list has the following attributes:

- Fill rate
- Forecast accuracy
- Gross margin
- In stock
- On time delivery
- Supply

4.1.3 Performance Data Item

This class provides the metrics, measurement value, and the time series data item for each performance data item. This class has no attributes.

4.1.4 Performance History

This is the root class that links one or more performance data items to a plan document. This class has no attributes.

4.1.5 Plan Document

This external class originates in Plan Common and is a class that is used in more than one CPFR® class diagram. Plan Document class is the EAN•UCC System equivalent to CPFR® Message class. This class has an attribute that provides the identification of the planner, identifies the source of the data, the time period for the document and the buyer and seller.

4.1.6 Time Series Data Item

This external class originates in Plan Common and is a class that is used in more than one CPFR® class diagram. This class links a Time Period, Measurement for the quantity involved, and to Collaborative Trade Item for the required product. This class has no attributes.

5.0 Global Data Dictionary: Data Attributes for Performance History

PerformanceDataItem

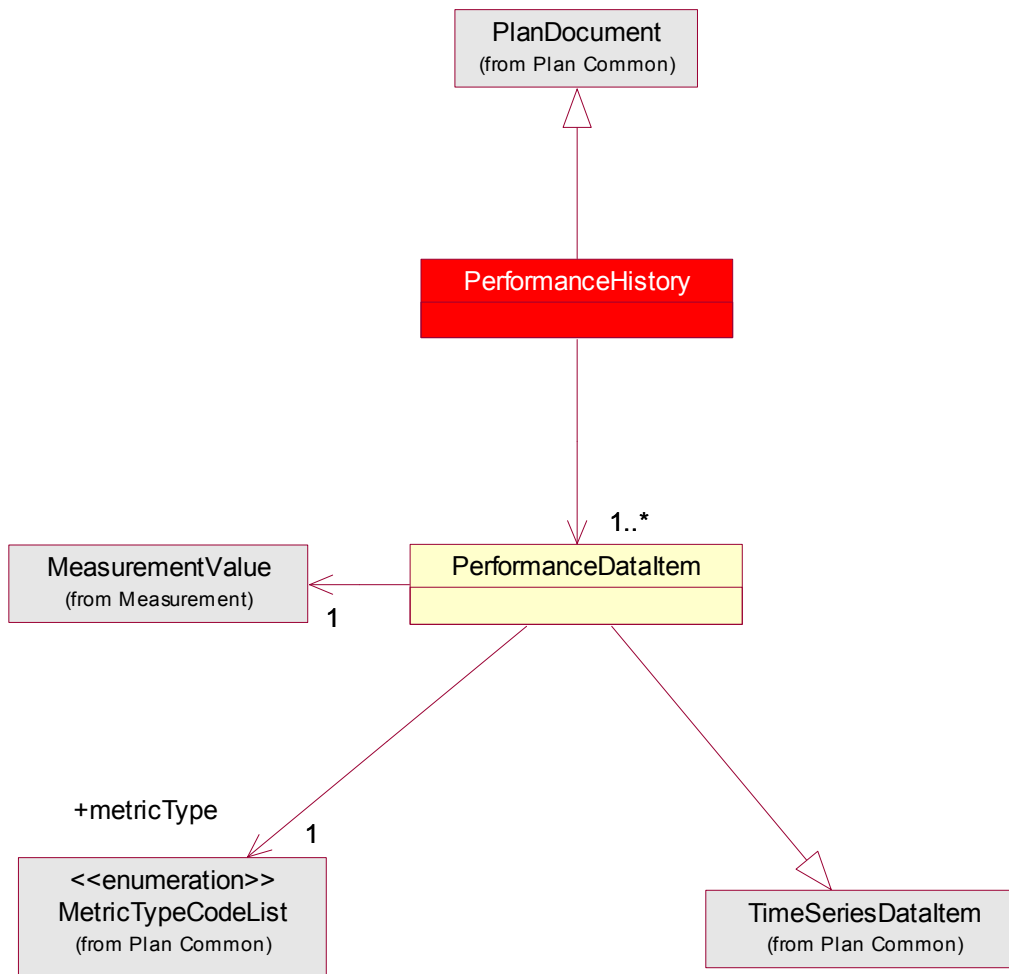
PerformanceHistory

Note: See Common Global Data Dictionary for all common classes/attributes.

Appendices

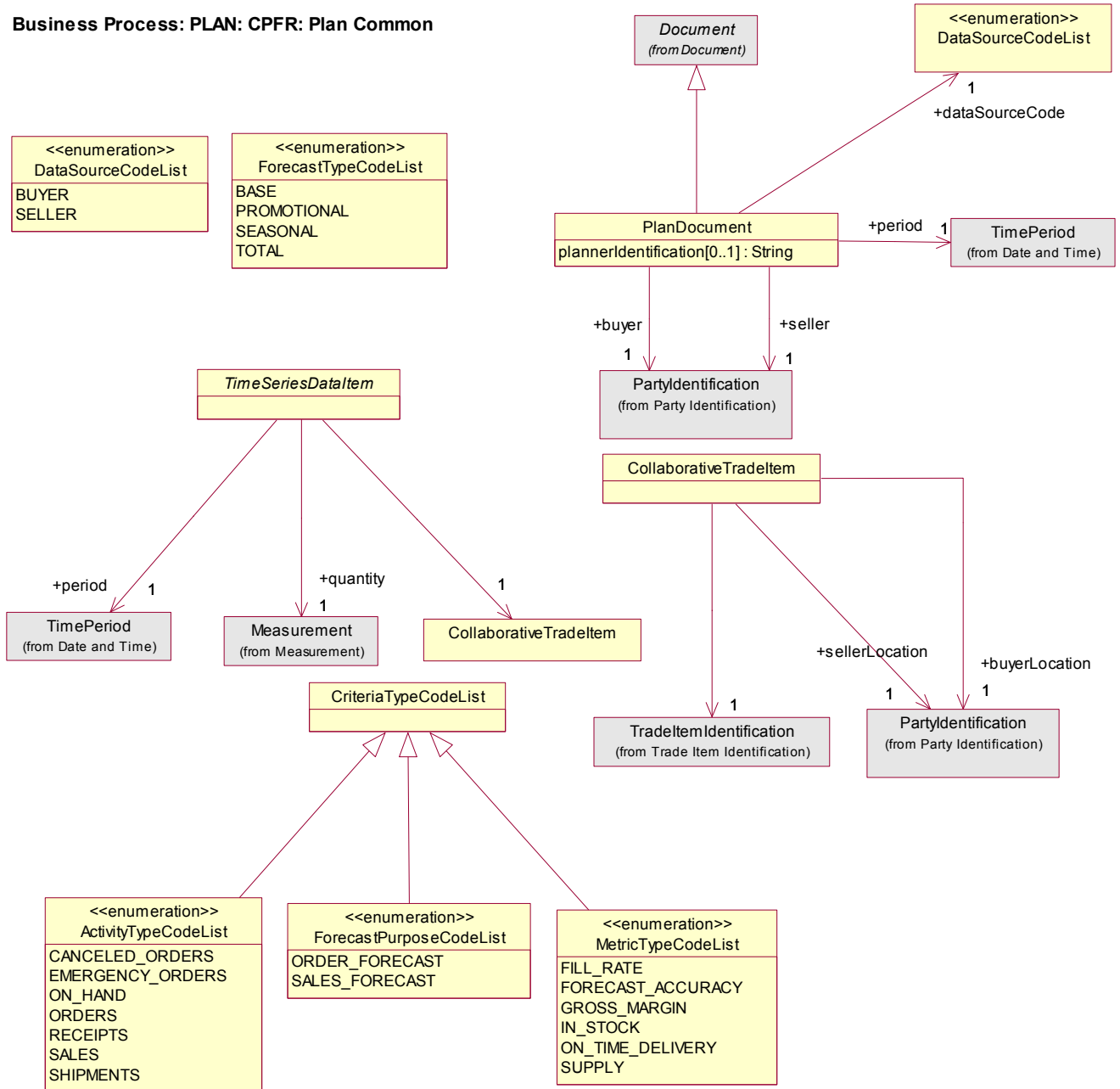
Appendix 1: Class Diagram for Performance History

Business Process: PLAN: CPFR: Interchange: Performance History



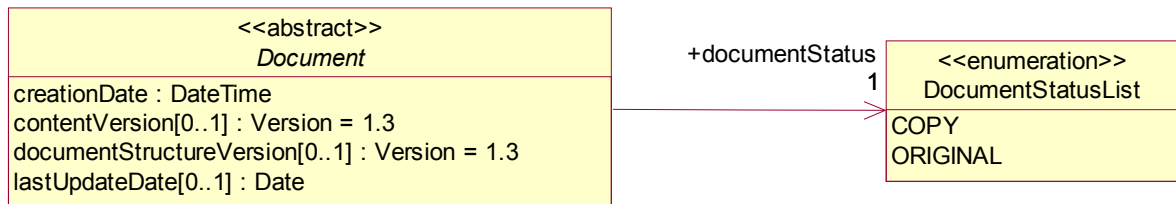
Appendix 2: Class Diagram from Plan Common

Business Process: PLAN: CPFR: Plan Common



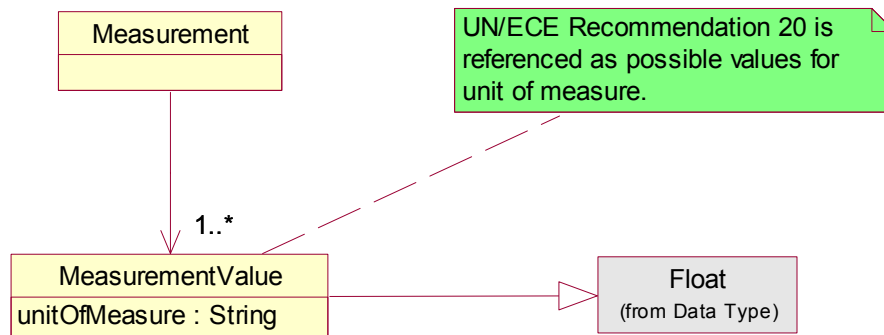
Appendix 3: Class Diagram from Document

Common Library :Common: Components: Document



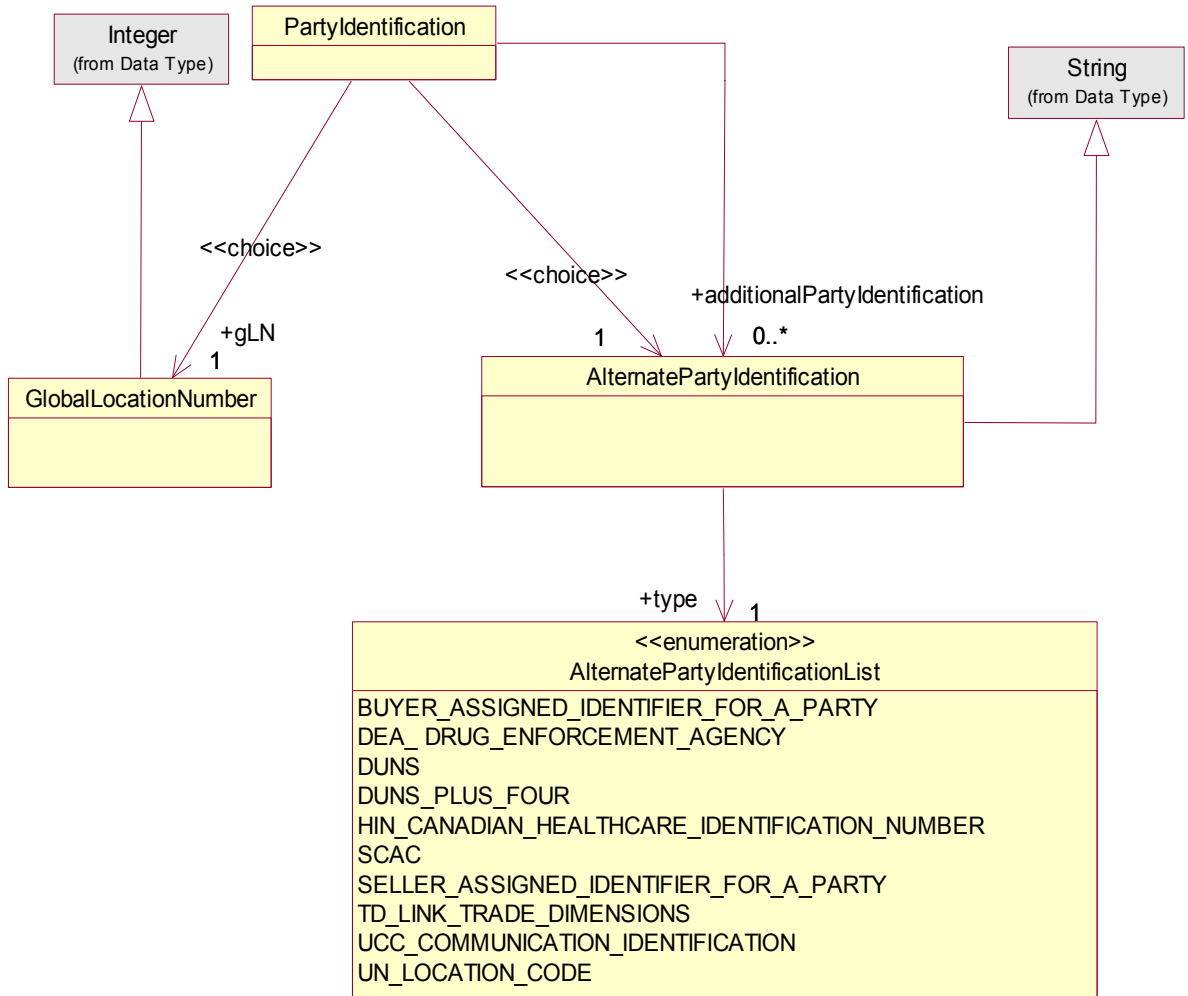
Appendix 4: Class Diagram from Measurement

Common Library: Common: Components :Measurement



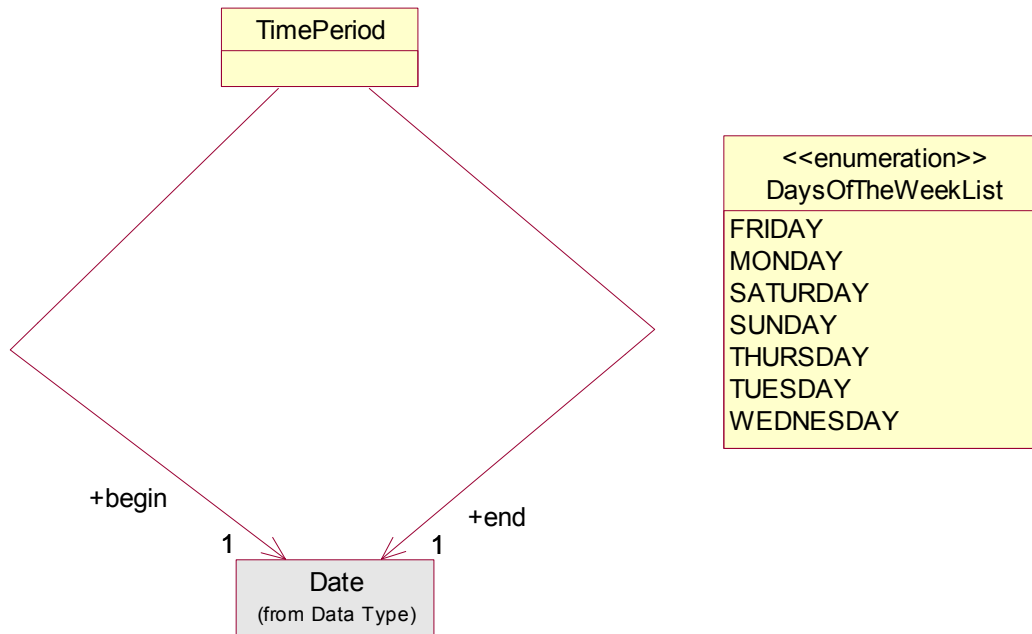
Appendix 5: Class Diagram from Party Identification

Common Library: Common: Identification: Party Identification



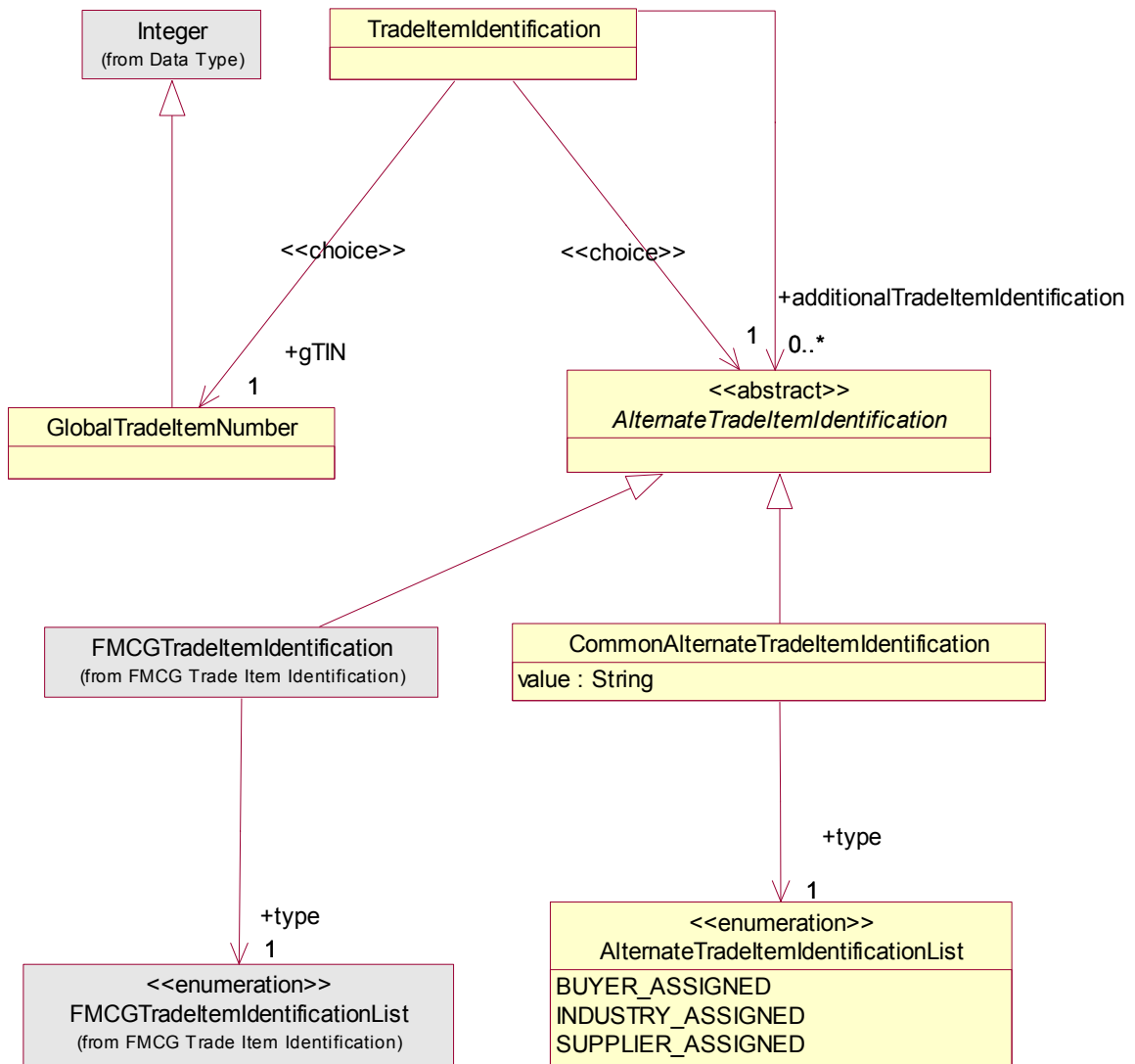
Appendix 6: Class Diagram from Date and Time

Common Library: Common: Components: Date and Time

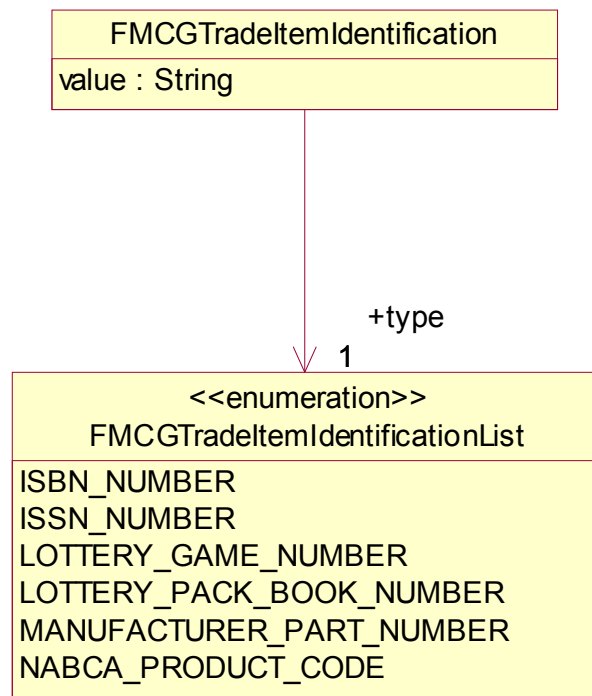
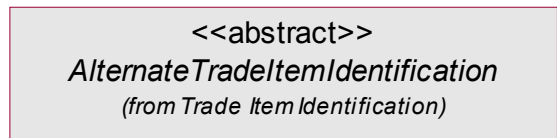


Appendix 7: Class Diagrams from Trade Item Identification

Common Library: Common: Identification: Trade Item Identification



Extension: FMCG: FMCG Trade Item Identification



Style Sheet

Description

This HTML has been created using a Style Sheet that is a visual representation of the data. It is not an actual Style Sheet, but an example of what a Style Sheet may look like.

HTML Example

Message MSG-123			
Creation Date	January 10, 2004 12:00:01	Representing Party	0012345000065
Msg From Party	0012345000359	Msg To Party	0012345000058

Transaction **Creator ID = MSG-123-20040110** **Content Owner = 0012345000359**

Command ADD **Creator ID = MSG-123-20040110** **Content Owner = 0012345000359**

Performance History Document

Document Information

Creation Date	January 10, 2004 12:00:01	Last Update Date	October 01, 2004
Content Version	1.3	Doc Structure Version	1.3
Status	COPY		

Performance History Information

Planner ID	UCC	Data Source	BUYER
Seller	0012345000058	Buyer	0012345000359
Period Begin	March 28, 2004	Period End	March 29, 2004

Performance Data Items

Performance Data Item 1

Trade Item ID	00123450000584, [fmcg] Alternate Item Identification (NABCA_PRODUCT_CODE)		
Buyer Location	0012345000359	Seller Location	0012345000058
Period Begin	March 28, 2004	Period End	March 29, 2004
Quantity	12 kgs		
Metric	FORECAST_ACCURACY	Event	12 kgs

GLOBAL DATA DICTIONARY

1.0 Performance History Class Data Descriptions v1.3

Class Name	Role Name	Enumerated Value for List Class	Attribute Name	Description	Min/Max Size	M/O	EAN.UCC XSD
AlternateTradeItemIdentification	additionalTradeItemIdentification			AlternateTradeItemIdentification is an abstract class from Item Identification used to identify a value for item identification other than GTIN.		O	Identification
AlternateTradeItemIdentificationList				Contains an enumeration list from the CommonAlternateTradeItemIdentificationClass.		M	Identification
		BUYER_ASSIGNED		This optional code will be used to cross-reference the Vendors internal trade item number to the GTIN in a one-to-one relationship.			
		INDUSTRY_ASSIGNED		This optional code will be used to cross-reference the Vendors internal trade item number to the GTIN in a one-to-one relationship.			
		SELLER_ASSIGNED		This optional code will be used to cross-reference the Vendors internal trade item number to the GTIN in a one-to-one relationship.			
CollaborativeTradeItem				This external class originates in Plan Common and is a class that is used in more than one CPFR class diagram. Collaborative Trade Item identifies the product with the buyer and seller locations.		M	PlanComponentLibrary
CommonAlternateTradeItemIdentification				Industry neutral Trade Item Identification.		M	Identification

			value	The default value to be used for the field when that field is not present in the file.	1/80	M	
DataSourceCodeList	dataSourceCode			DataSourceCode is an external class that originates in Plan Common. The data source code list has the following attributes: ·Buyer ·Seller		M	PlanComponentLibrary
		BUYER		buyer			
		SELLER		seller			
Date	begin					M	
	end						
Document				This class is used to specify the basic information about the context of the message.		M	Components
			creationDate	DateTime			
			contentVersion	Version = 1.3			
			documentStructureVersion	Version =1.3			
			lastUpdateDate	Date			
DocumentStatusList	documentStatus			Indicates if the document is a copy or an original.		M	Components
		COPY		A copy of the original document			
		ORIGINAL		The original document			
FMCGTradeItemIdentification						O	FMCGIdentification
			value	The default value to be used for the field when that field is not present in the file.	1/80	M	
FMCGTradeItemIdentificationList	type					M	FMCGIdentification
		ISBN_NUMBER		ISBN Number			
		ISSN_NUMBER		ISSN Number			

		LOTTERY_GAME_NUMBER		Lottery Game Number			
		LOTTERY_PACK_BOOK_NUMBER		Lottery Pack Book Number			
		MANUFACTURER_PART_NUMBER		Manufacturer Part Number			
		NABCA_PRODUCT_CODE		NABCA Product Code			
GlobalTradeItemNumber	gTIN			A particular Global trade item Number, a numerical value used to uniquely identify a trade item. A Trade item is any trade item (product or service) upon which there is a need to retrieve pre-defined information.		O	Identification
Measurement	quantity			This external class originates in Measurement and is a class that is used in more than one class diagram. The measurement class provides the value for the actual impact.		M	Components
MeasurementValue				This external class originates in Measurement and is a class that is used in more than one CPFR class diagram. This class has an attribute unit of measure and allows for the value of the measurement.		M	Components
			unitOfMeasure	UN/ECE Recommendation 20. Unit of measure code.	1/15	M	

MetricTypeCodeList	metricType			This external class originates in Plan Common and is a class that is used in more than one CPFR(r) class diagram. This class identifies the metric type code. The metric type code list has the following attributes:·Fill rate·Forecast accuracy·Gross Margin··In Stock·On Time Delivery·Supply		M	PlanComponentLibrary
		FILL_RATE		Fill Rate			
		FORECAST_ACCURACY		Forecast Accuracy			
		GROSS_MARGIN		Gross Margin			
		IN_STOCK		In Stock			
		ON_TIME_DELIVERY		On Time Delivery			
		SUPPLY		Supply			

PartyIdentification	buyer			There is a choice of selecting either a GLN (Recommended) or Alternate Party Identification as your primary party identification. Additionally, optional party identification, which cannot be GLN may be included. For example you may select one GLN as your one GLN as your primary party identification with additional party identification (ie. GLN cross referenced to DUNS or you may select an Alternate as your primary party identification with reference to additional party identification alternates). If you elect to use a DUNS number as your primary party identification, you may cross-reference this to another alternate number such as a buyer assigned customer number. However, again GLN may not be used as the additional alternate.	M	Identification
	buyerLocation				M	
	seller				M	
	sellerLocation				M	
PerformanceDataItem				This class provides the metrics and the time series data trade item for each performance trade item. This class has no attributes.	M	PerformanceHistory
PerformanceHistory				This is the root class that links one or more performance items to a plan document. This class has no attributes.	M	PerformanceHistory

PlanDocument				This external class originates in Plan Common and is a class that is used in more than one CPFR class diagram. Plan Document class is the EAN-UCC System equivalent to CPFR Message class. This class has an attribute that provides the identification of the planner, identifies the source of the data, the time period for the document and the buyer and seller.		M	PlanComponentLibrary
			plannerIdentification	Generic field to denote the specific planner involved with planning this event. This can be either Seller assigned or Buyer assigned.	1/80	O	
TimePeriod	period			This external class originates in Date and Time and is a class that is used in more than one class diagram.		M	Components
TradeItemIdentification				A unique identification of the trade item or service. It is recommended to use the Global Trade Item Number (GTIN) as the primary trade item identification.		M	Identification
TimeSeriesDataItem				This external class originates in Plan Common and is a class that is used in more than one CPFR class diagram. This class links a time period to measurement for the quantity involved and to collaborative item for the required product.		M	PlanComponentLibrary

Instance File

Description

The Instance File is an example of what the schema may look like when it includes live data. This can be used as comparison to a completed schema and can serve as a point of reference for development.

Instance File Example

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" href="../../4_XSL/Main.xsl"?>
<!-- This is a sample file-->
<eanucc:envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:eanucc="http://www.ean-ucc.org/schemas/1.3/eanucc" xmlns:fmcg="http://www.ean-ucc.org/schemas/1.3/fmcg" xsi:schemaLocation="http://www.ean-ucc.org/schemas/1.3/eanucc
../2_XSD_PROXY/PerformanceHistoryProxy.xsd" communicationVersion="1.3">
  <messageHeader creationDate="2004-01-10T12:00:01">
    <userId>163485</userId>
    <password>MJK1635K</password>
    <messageIdentifier>MSG-123</messageIdentifier>
    <to>
      <gln>0012345000058</gln>
    </to>
    <from>
      <gln>0012345000359</gln>
    </from>
    <representingParty>
      <gln>0012345000065</gln>
    </representingParty>
  </messageHeader>
  <body>
    <eanucc:transaction>
      <entityIdentification>
        <uniqueCreatorIdentification> MSG-123-20040110</uniqueCreatorIdentification>
        <contentOwner>
          <gln>0012345000359</gln>
        </contentOwner>
      </entityIdentification>
      <command>
        <eanucc:documentCommand>
          <documentCommandHeader type="ADD">
            <entityIdentification>
              <uniqueCreatorIdentification> MSG-123-
20040110</uniqueCreatorIdentification>
              <contentOwner>
                <gln>0012345000359</gln>
              </contentOwner>
            </entityIdentification>
          </documentCommandHeader>
          <documentCommandOperand>
```

```

        <eanucc:performanceHistory creationDate="2004-01-10T12:00:01"
documentStatus="COPY" contentVersion="1.3" documentStructureVersion="1.3" lastUpdateDate="2004-
10-01">
            <plannerIdentification>UCC</plannerIdentification>
            <dataSourceCode>BUYER</dataSourceCode>
            <seller>
                <gln>0012345000058</gln>
            </seller>
            <buyer>
                <gln>0012345000359</gln>
            </buyer>
            <period begin="2004-03-28" end="2004-03-29"/>
            <performanceDataItem>
                <collaborativeTradeItem>
                    <tradeItemIdentification>
                        <gtin>00123450000584</gtin>
                        <additionalTradeItemIdentification
xsi:type="fmcg:TradeItemIdentificationType" type="NABCA_PRODUCT_CODE">
                            <fmcg:value>Alternate Item Identification</fmcg:value>
                        </additionalTradeItemIdentification>
                    </tradeItemIdentification>
                    <buyerLocation>
                        <gln>0012345000359</gln>
                    </buyerLocation>
                    <sellerLocation>
                        <gln>0012345000058</gln>
                    </sellerLocation>
                </collaborativeTradeItem>
                <period begin="2004-03-28" end="2004-03-29"/>
                <quantity>
                    <measurementValue unitOfMeasure="kgs">12</measurementValue>
                </quantity>
                <metricType>FORECAST_ACCURACY</metricType>
                <measurementValue unitOfMeasure="kgs">12</measurementValue>
            </performanceDataItem>
        </eanucc:performanceHistory>
    </documentCommandOperand>
</eanucc:documentCommand>
</command>
</eanucc:transaction>
</body>
</eanucc:envelope>

```