

Business Message Standard (BMS)

for

Plan/Forecast Revisions

BRG: Plan

Version: 2.0.3

Date: 31.03.2005



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BRAD Date: 30.06.2005
BRAD Version: 0.1.2

BRAD Title:
BRAD Date:
BRAD Version:

Document Summary

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Document Change History

Note: During development include revisions in history. Upon Approval, eliminate revisions and include only delta from previous version.

Date of Change	Version	Changed By	Reason for Change	Summary of Change	Model Build #
31.03.05	2.0.0	Andrew Hearn	Initial Version in BMS/BSD template	Migration of BRD to standard BMS/BSD format	N/A
31.03.05	2.0.2	Andrew Hearn	Context Update	Updated the context listed within the document	N/A
23.04.2007	2.0.3	Giovanni Biffi	Editorial Changes	Minor Editorial Changes to the Document	N/A

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1 Business Solution

1.1 Business Domain View

1.1.1 Problem Statement / Business Need

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.

In the CPFR® process a forecast revision is a change to a forecast which is a collection of time series data items, called forecast items, which describe future demand for products sourced from a seller organization and distributed at a specific buyer location.

Forecast items may be frozen, in which case they may not be adjusted. Otherwise, the receiving organization has the option of revising the item and notifying an appropriate trading partner via a forecast revision.

Forecast revision messages have the same structure as forecasts. However, forecast revisions trade items have a comment and an adjustment reason code, which explain why the revision is being proposed. Forecast revision trade items also include the timestamp of the forecast being revised, so that comparisons with the original forecast can be made.

Forecast revisions may be submitted (new), acknowledged, accepted, rejected or superseded.

1.1.2 Objective

To supply the detail design of the Forecast Revision business transaction needed to meet the requirements of the referenced BRAD(s).

1.1.3 Audience

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

1.1.4 Artefacts

Artefact name	State	Artefact / State description

1.1.5 References

Reference Name	Description
Forecast Revisions – Business Requirement Document Version 2.0.0	The Business Requirement Document released for version 2.0 of the BMS Standard
EAN•UCC Global Business Model (Process and Data), “The Trade of Goods and Services”, October 1999	

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VICS Collaborative Planning Forecasting and Replenishment (CPFR®), Global Commerce Initiative Recommendation, June 30, 2001	
VICS CPFR® XML Messaging Model, June 13, 2001	

1.1.6 Acknowledgements

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

1.1.6.1 BRG Members

Function	Name	Company / organisation
BRG Chair		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		
BRG Member		

1.1.6.2 ITRG Members

Function	Name	Company / organisation
ITRG Chair		
ITRG Member		
ITRG Member		
ITRG Member		
...		

1.1.6.3 Task/Project Group Participants (*where applicable*)

Function	Name	Company / organisation
Participant		
Participant		
Participant		
...		

1.1.6.4 Design Team Members

Function	Name	Organisation
Modeller		
XML Technical Designer		
EANCOM Technical Designer		
Peer Reviewer		

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1.2 Business Context

(Note: The business context of the business)

Context Category	Value(s)
Industry	All
Geopolitical	All
Product	All
Process	Plan
System Capabilities	EAN.UCC
Official Constraints	None

1.3 Additional Technical Requirements Analysis

1.3.1 Technical Requirements (optional)

(User Interface, Security, Performance, Quality, etc.)

Number	Statement	Rationale

1.4 Business Transaction View

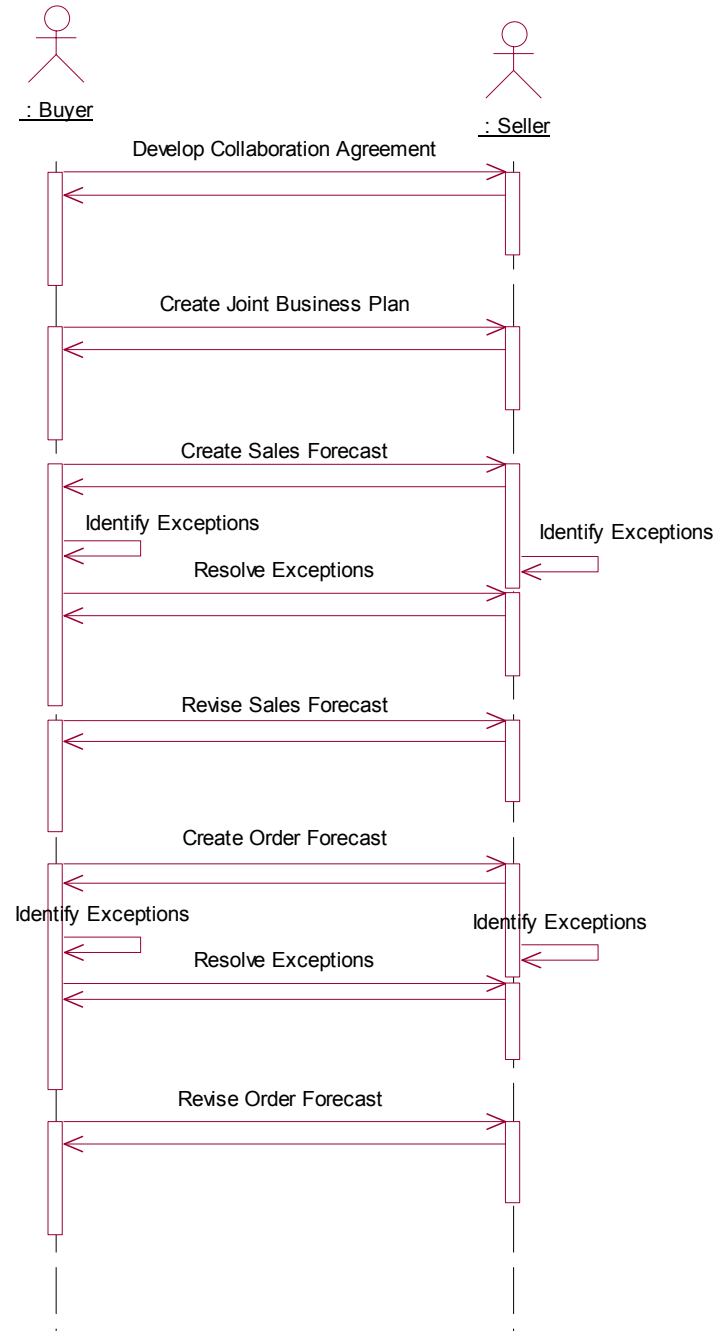
The buyer and seller must engage and complete CPFR® Step 1 “Develop Collaboration Arrangement” and CPFR® Step 2 “Create Joint Business Plan” as prerequisite steps to creating forecasts.

Step 1 is where the buyer and seller establish the guidelines and rules for the collaborative relationship. The “collaboration arrangement” addresses each party’s expectations and the actions and resources necessary for success. To accomplish this, the buyer and seller co-develop a general business arrangement that includes the overall understanding and objective of the collaboration, confidentiality agreements, and the empowerment of resources (both actions and commitment) to be employed throughout the CPFR® process.

In step 2 the seller and buyer exchange information about their corporate strategies and business plans in order to collaborate on developing a joint business plan. Following the principles of category management, the partners first create a partnership strategy and then define category roles, objectives, and tactics. The item management profiles (e.g., order minimums and multiples, lead times, order intervals) for items to be collaborated on are established. The development of a joint business plan improves the overall quality of forecasting by including data from both parties. It also facilitates communication and coordination across the supply chain.

Revisions may occur while processing either a sales forecast or an order forecast.

1.4.1 Business Transaction Use Case Diagram



1.4.2 Use Case Description

Use Case ID	UC-1																											
Use Case Name	Sales Forecast																											
Use Case Description	The objective is to elaborate upon the Sales Forecast process in enough detail to support the creation of an acceptable sales forecast created by collaboration between the buyer and the seller.																											
Actors (Goal)	Sales Forecast is a two-actor system involving a collaborative effort between a buyer and a seller. The lead actor in the collaboration depends upon the scenario most appropriate to the trading partner's business situation.																											
Performance Goals																												
Preconditions	A collaboration agreement and joint business plan must be in place.																											
Post conditions	Successful: An acceptable sales forecast is available for the creation of an order forecast. Unsuccessful: The trading partners were not able to create an acceptable sales forecast.																											
Scenario	Begins after completion of a collaboration arrangement and the creation of a joint business plan. (Steps 1 and 2 previously described in this document).																											
	Continues with...																											
	<table><tr><th>Step #</th><th>Actor</th><th>Activity Step</th></tr><tr><td>1</td><td>Buyer, Seller</td><td>Analyze current joint business plan</td></tr><tr><td>2</td><td>Buyer, Seller</td><td>Analyze casual information</td></tr><tr><td>3</td><td>Buyer</td><td>Collects and analyzes point of sale data</td></tr><tr><td>4</td><td>Buyer</td><td>Identifies planned events such as openings, closings, holidays, promotions, ads, new products and changes</td></tr><tr><td>5</td><td>Seller</td><td>Identifies planned events such as promotions, ads, new products and changes</td></tr><tr><td>6</td><td>Buyer, Seller</td><td>Update shared event calendar</td></tr><tr><td>7</td><td>Buyer, Seller</td><td>Gather exception and resolution data</td></tr><tr><td>8</td><td>Buyer, Seller</td><td>Generate sales forecast</td></tr></table>	Step #	Actor	Activity Step	1	Buyer, Seller	Analyze current joint business plan	2	Buyer, Seller	Analyze casual information	3	Buyer	Collects and analyzes point of sale data	4	Buyer	Identifies planned events such as openings, closings, holidays, promotions, ads, new products and changes	5	Seller	Identifies planned events such as promotions, ads, new products and changes	6	Buyer, Seller	Update shared event calendar	7	Buyer, Seller	Gather exception and resolution data	8	Buyer, Seller	Generate sales forecast
	Step #	Actor	Activity Step																									
	1	Buyer, Seller	Analyze current joint business plan																									
	2	Buyer, Seller	Analyze casual information																									
	3	Buyer	Collects and analyzes point of sale data																									
	4	Buyer	Identifies planned events such as openings, closings, holidays, promotions, ads, new products and changes																									
	5	Seller	Identifies planned events such as promotions, ads, new products and changes																									
	6	Buyer, Seller	Update shared event calendar																									
7	Buyer, Seller	Gather exception and resolution data																										
8	Buyer, Seller	Generate sales forecast																										
	Ends when a sales forecast is initially generated by one trading partner, communicated to the other trading partner and then used as a baseline for the creation of an order forecast.																											

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Alternative Scenario	(any alternatives to the above scenario)		
	Step #	Actor	Activity Step
Related Requirements			
	1		
Related Rules			

Use Case ID	UC-2															
Use Case Name	OrderForecast															
Use Case Description	The objective is to elaborate upon the Order Forecast process in enough detail to support the creation of an acceptable time-phased, netted order forecast.															
Actors (Goal)	Order Forecast is a two-actor system involving a collaborative effort between a buyer and a seller. The lead actor in the collaboration depends upon the scenario most appropriate to the trading partner's business situation.															
Performance Goals																
Preconditions	A collaboration agreement, joint business plan and baseline sales forecast must be in place.															
Post conditions	<p>Successful: An acceptable order forecast is available for the use by the trading partners.</p> <p>Unsuccessful: The trading partners were not able to create an acceptable order forecast.</p>															
Scenario	<p>Begins after completion of a sales forecast that has become the baseline from which order forecasting can start.</p> <p>Continues with...</p> <table border="1"> <tr> <td>Step #</td> <td>Actor</td> <td>Activity Step</td> </tr> <tr> <td>1</td> <td>Buyer, Seller</td> <td>Provide sales forecast data</td> </tr> <tr> <td>2</td> <td>Buyer</td> <td>Provides point of sale data</td> </tr> <tr> <td>3</td> <td>Buyer</td> <td>Provides order forecast impact events</td> </tr> <tr> <td>4</td> <td>Buyer</td> <td>Provides inventory strategies and seasonalities</td> </tr> </table>	Step #	Actor	Activity Step	1	Buyer, Seller	Provide sales forecast data	2	Buyer	Provides point of sale data	3	Buyer	Provides order forecast impact events	4	Buyer	Provides inventory strategies and seasonalities
Step #	Actor	Activity Step														
1	Buyer, Seller	Provide sales forecast data														
2	Buyer	Provides point of sale data														
3	Buyer	Provides order forecast impact events														
4	Buyer	Provides inventory strategies and seasonalities														

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	5	Buyer	Provides current inventory position including on hand, on order and in transit
	6	Seller	Analyzes and provides manufacturer's historical demand & shipments
	7	Seller	Analyzes and provides capacity limitations
	8	Seller	Retrieves additional item management data such as frozen periods, lead times, DC changes, and logistics data
	9	Seller	Gathers order filling/shipment execution data
	10	Buyer, Seller	Both trading partners gather exception and resolution data
	11	Buyer, Seller	Both trading partners create order forecast
	Ends when an acceptable order forecast is available for the use by the trading partners.		
Alternative Scenario	<i>(any alternatives to the above scenario)</i>		
	Step #	Actor	Activity Step
Related Requirements			
	1		
Related Rules			

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1.4.3 Business Transaction Activity Diagram(s)

1.4.4 Business Transaction Sequence Diagram(s) (optional)

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1.5 Information Model (including GDD Report)

1.5.1 Data Description:

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Related Requirements
AbstractForecast				BRD for Forecast Revision V0.1.2
	forecastPurpose			BRD for Forecast Revision V0.1.2
AbstractForecastDataItem				BRD for Forecast Revision V0.1.2
	forecastType			BRD for Forecast Revision V0.1.2
		None	TimeSeriesDataItem	BRD for Forecast Revision V0.1.2
ForecastRevision				BRD for Forecast Revision V0.1.2
	revisionStatus			BRD for Forecast Revision V0.1.2
		None	AbstractForecast	BRD for Forecast Revision V0.1.2
		None	ForecastRevisionDataItem	BRD for Forecast Revision V0.1.2
ForecastRevisionDataItem				BRD for Forecast Revision V0.1.2
	adjustmentReason			BRD for Forecast Revision V0.1.2
	forecastRevisionComment			BRD for Forecast Revision V0.1.2
	sourceForecastGenerationDateTime			BRD for Forecast Revision V0.1.2
		None	AbstractForecastDataItem	BRD for Forecast Revision V0.1.2

1.5.2 GDD Report :

Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
AbstractForecast				Abstract_ Forecast. Details	!! This class merely links the Forecast Purpose Code List, Forecast Revision, and Plan Document. It has no attributes.	
	forecastPurpose			Abstract_ Forecast. Purpose.	!! This external class originates in Plan Common and is a class that is used in more than	1..1

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Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
				Forecast Purpose Criteria Type_ Code	one CPFR class diagram. Each Forecast Data Item Exception Criterion will be assigned a forecast purpose code. The Forecast Purpose Code List has the following attributes: Order forecast, Sales forecast	
AbstractForecastDataItem				Abstract_Forecast_ Time Stamped Trade Item Quantity. Details	!! This class merely links the Forecast Revision Data Item, Forecast Type Code List, and Time Series Data Item. The Abstract Forecast Data Item has no attributes.	
	forecastType			Abstract_Forecast_ Time Stamped Trade Item Quantity. Association. Forecast Type_ Code	!! This external class originates in Plan Common and is a class that is used in more than one CPFR class diagram. Each Abstract Forecast Data Item will be assigned a forecast type code identifying it as a base, promotional, seasonal or total type of item. The Forecast Type Code List has the following attributes. Base, Promotional, Seasonal, Total	1..1
		None	TimeSeries-DataItem	Abstract_Forecast_ Time Stamped Trade Item Quantity. Inheritance_ Association. Time Stamped Trade Item Quantity	None	1..1
ForecastRevision				Revised_ Forecast. Details	!! The Forecast Revision classes are pictured and are listed here alphabetically. These include: Abstract Forecast, Abstract Forecast Data Item, Adjustment Reason Code List, Forecast Purpose Code List, Forecast Revision, Forecast Revision Data Item , Forecast Type Code List, Plan Document, Revision Status	

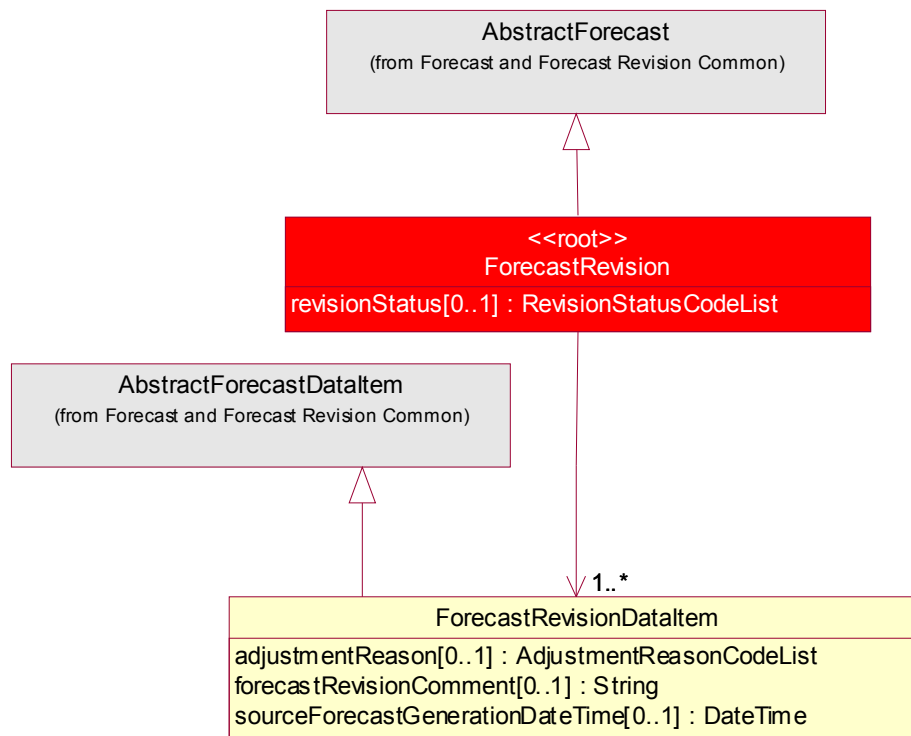
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Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
					Code List, Time Series Data Item	
	revisionStatus			Revised_ Forecast. Revision Status. Revision Status_ Code	!! Each Forecast Revision may be assigned a revision status code from an enumerated listing. The Revision Status Code List has the following attributes: Accepted, Acknowledged, New, Rejected, Superseded	0..1
		None	AbstractForecast	Revised_ Forecast. Inheritance_ Association. Abstract_ Forecast	None	1..1
		None	ForecastRevision-DataItem	Revised_ Forecast. Association. Forecast Revision_ Time Stamped Trade Item Quantity	None	1..*
ForecastRevisionDataItem				Forecast Revision_ Time Stamped Trade Item Quantity. Details		
	adjustmentReason			Forecast Revision_ Time Stamped Trade Item Quantity. Adjustment Reason. Adjustment Reason_ Code	!! Each Forecast Revision Data Item will have an adjustment reason for the forecast revision based upon changes for input data, identified exceptions or changes to an item as agreed upon by the trading partners. The Adjustment Reason Code List has the following attributes: Canceled promotion, Discontinued product, Distribution issue, Expanded promotion, Forward buy, Inventory policy change, Miscellaneous event, New location, New product, New promotion, Order policy change, Overstock	0..1

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Class (ABIE)	Attribute (BBIE)	Association (ASBIE)	Secondary Class	Official Dictionary Entry Name	Definition	Multiplicity
					condition, Price change, Product changeover, Production issue, Reduced Promotion, Revised Plan, Revised Promotion, Store closure, Transportation issue, Weather related event	
	forecastRevisionComment			Forecast Revision_ Time Stamped Trade Item Quantity. Comment. Text	User comment on the revision.	0..1
	sourceForecastGenerationDateTime			Forecast Revision_ Time Stamped Trade Item Quantity. Source Forecast Generation Date. Date Time	Date and time that the forecast that this revision modifies was generated/created, for identification purposes.	0..1
		None	AbstractForecast-DataItem	Forecast Revision_ Time Stamped Trade Item Quantity. Inheritance_ Association. Abstract_Forecast_ Time Stamped Trade Item Quantity	None	1..1

1.5.3 Class Diagrams



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1.5.4 Code Lists

Code List Name	Code List Description
RevisionStatusCodeList	Each Forecast Revision may be assigned a revision status code from an enumerated listing.
Code Name	Code Description
ACCEPTED	Revision accepted.
ACKNOWLEDGED	Revision acknowledged.
NEW	New revision.
REJECTED	Revision rejected.
SUPERSEDED	Revision superseded.

Code List Name	Code List Description
AdjustmentReasonCodeList	Each Forecast Revision Data Item will have an adjustment reason for the forecast revision based upon changes for input data, identified exceptions or changes to an item as agreed upon by the trading partners.
Code Name	Code Description
CANCELED_PROMOTION	Promotion canceled.
DISCONTINUED_PRODUCT	Discontinued product.
DISTRIBUTION_ISSUE	Issues related to distribution center inventory, labor or equipment.
EXPANDED_PROMOTION	Promotion expanded to incorporate additional displays, ad size/placement, products, locations or other attributes.
FORWARD_BUY	Elected to purchase a quantity in excess of immediate demand.
INVENTORY_POLICY_CHANGE	Policies related to safety stock, withdrawals, or inventory placement have been changed.
MISCELLANEOUS_EVENT	A reason not covered by the standard reason codes
NEW_LOCATION	One or more selling or distribution locations closed.
NEW_PRODUCT	New product introduction.

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NEW_PROMOTION	New promotion.
ORDER_POLICY_CHANGE	Policies related to reorder points, order intervals, lead time, minimum or incremental order sizes have changed.
OVERSTOCK_CONDITION	There is an excess of inventory for the item.
PRICE_CHANGE	The price of the item changed.
PRODUCT_CHANGEOVER	Changeover from one revision of a product to the next impacted demand.
PRODUCTION_ISSUE	Issues related to production capacity, yield, material or labor availability.
REDUCED_PROMOTION	Promotion scope reduced in terms of products, locations or other terms.
REVISED_PLAN	Revised the sales or order forecast for this item.
REVISED_PROMOTION	Promotion pricing, products, locations, displays, ads or other terms revised.
STORE_CLOSURE	Store closure.
TRANSPORTATION_ISSUE	Issues related to transportation availability or performance.
WEATHER_RELATED_EVENT	Weather-related event affected demand such as heat wave, flood, blizzard, hurricane or other.

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1.6 Business Document Example

1.7 Implementation Considerations

1.8 Testing

1.8.1 Pass / Fail Criteria

Number	Test Criteria	Related Requirement	Design Element	Pass Criteria	Fail Criteria
1					
2					
3					

1.8.2 Test Data

Attribute	Value

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1.9 Appendices

1.10 Summary of Changes

Change	BMS Ver- sion	Associated CR Number

2 XML Technical Solution ITRG Packet

The Technical Representation of the Business process is documented in a Technical Solution ITRG Packet containing all supplemental XML artefacts and is used by the Information Requirements Group (ITRG) to evaluate the solution. Upon approval from the Information Technical Requirements Group (ITRG), the Technical Solution ITRG Packet is updated to the Technical Solution Implementers Packet and published with the Business

Message Standard at:

http://www.ean-ucc.org/global_smp/ean.ucc_standards.htm.

Technical Solution ITRG Packet Content:

- Business Message Standard (BMS)
- ITRG Review Packet
 - Style Sheet: 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 ex-ample of what a Style Sheet may look like.
 - Instance File: 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.
 - Technical Level GDD Report

Technical Solution Implementers Packet Content:

Contains all the message specific.XSD files required to implement

Example:

- AS2Envelope
- Command.xsd
- DocumentCommand.xsd
- Proxy.xsd
- ComponentLibrary.xsd

Both the Business Message Standard and the Implementers Packet are available during the ITRG Review Period in the working documents section of the ITRG eRoom:

http://eroom.uncouncil.org/eRoom/facility/InformationTechnicalAssessmentGroupITAG/0_14f7

All documents for review will be in this folder listed by name of the Change Request and Change Request Number. The Business Message Standard is not open for review, but offered as the basis for determining the suitability of the technical solutions.

This eRoom may be accessed by using the following User Name and Password:

User Name: guest

Password: guest