

MQSeries® Financial Services Edition



Open Industry Application Feature

Version 1.2.2

NOTE:

Before using this information and the product it supports, read the information in "Appendix, *Notices*" on page 132.

First Edition (November 2001)

This edition applies to version 1, release 2, modification 2 of MQSeries Financial Services Edition (product number 7J0423) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this book

This publication is an accompaniment to the MQSeries Financial Services Edition Model Office Reference Manual. It's subject matter is directed for use with the Open Organization Application Feature and is primarily intended for use in that sector. It includes use cases, interaction diagrams, and example OAG XML messages, all of which may be accessed either in this document, or on the MQSFSE Product CD.

Who should read this book

Anyone who is working on an MQSFSE implementation can review this reference manual for examples of the various phases of a working MQSFSE solution. Business analysts would also benefit from reading all of the use cases and diagrams contained in this publication.

Terminology used in this book

All new terms introduced in this book are defined in the *Glossary* on page 136.

This book uses the following shortened names:

- MQSeries®: a general term for IBM MQSeries messaging products.
- Model Office: a general term used to describe an MQSFSE development and test environment that includes applications with implemented use cases.
- Use Case: a general term that refers to the business scenarios used in the Model Office.

How to get additional information

Visit the following home page at:

<http://www.ibm.com/software/mqseries/support/>

By following this link you can find:

- The latest information about MQSeries family of products.
- Download SupportPacs.
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Chapter 1

Introduction

The Open Applications Group (OAG) component represents the base offering of MQSFSE v1.2.2. While the use cases, system interaction diagrams, and MQSeries Workflow process templates are designed around manufacturing and retail sales, the applicability of the approach and the Open Application Group Integration Specification (OAGIS) reaches beyond these two representative industries. The OAG architecture was employed for adding these industries to the MQSFSE v1.2.2 product.

OAG, which has grown from the World Wide Web Consortium (W3C) version of Extensible Markup Language (XML), has achieved an ever expanding role in these industries. With the addition of the business scenarios found in this manual, the MQSFSE v1.2.2 product is able to demonstrate its capacity for XML languages with the inclusion of OAG XML as the messaging dialect.

The use of XML demonstrates advantages over the more traditional approaches to inter-application messaging and interface development, and it is felt this approach offers a compelling case for the use of OAG. The result is a framework that strongly supports implementation projects for vendors, integrators, and customer communities.

OAG provides a robust and scalable framework for the exchange of data and instructions independent of a particular network technology or computing platform. The information sharing potential of OAG is not just limited to support communications in a particular business enterprise; it can also support communications on a wider scale. OAG can present similar options for the industries within which MQSFSE v1.2.2 is being implemented, since it is extensible and customizable for future growth.

Retail sales and manufacturing represents two industries in which the use of the Open Application Group (OAG) approach for integration is in use. These organizations are represented by car manufacturers and sales outlets as well as other product producers and suppliers interacting with customers and other businesses. Organizations, more than ever, are buying packaged software to support their key business functions, and are also faced with mergers and acquisitions and globalization. In order to leverage their purchased software with their existing and legacy systems, the challenge of system integration is faced daily. MQSFSE can help resolve this integration issue for retail sales, manufacturing, and other common industries in this field, and the use cases contained within the product can serve as a starting point for that resolution.

The use cases contained within the MQSFSE product were prepared to make an entrance into these enterprises for MQSFSE. The use cases were chosen to demonstrate Customer Relationship Management (CRM) and the interaction within the business, as well as from purchaser through shipment of the purchase. Combined with the OAG architecture and language, these use cases can serve as the starting point and reference for the implementation of the MQSFSE product.

In addition, an Interface Design Model (IDM) and a tooling environment that generates IDM XML messages is also provided. This IDM is discussed in *Chapter 2* of the **Model Office Reference Manual**.

Following the business scenarios, system interaction diagrams, and MQSeries Workflow process templates, this manual also contains notes on the "wrapping" of XML messages.

Use of Interface Design Model (IDM)

The partial Interface Design Model (IDM) that is provided for the MQSFSE product has been extended to cover the Open Application Group (OAG) message content. The model covers the areas identified in the MQSFSE use cases and data element definition spreadsheets only. The IDM contains a component that allows DTD creation for this OAG data content, and will provide messages formatted according to the IDM, not OAG standard messages.

The model was developed in Rational Rose 2000e Professional Edition and can be loaded in this version or any other, compatible version by following the instructions below:

1. In order to install the model, the path map (**File>Edit Path Map**) **\$Component** should be specified to the directory where the model files are located.
2. The **conversion.ini** file should be placed in the **Rational\Rose** directory.
3. In the **conversion.ini** file, a path should be specified for the static XML file.
For example: **static=c:\staticXML.txt**. The static XML file contains all the elements that will always be generated for any DTD.

Chapter 2

Use cases

Add salesorder

Use case # SSD002 v1r3	Add sales order
Subject area	Retail Sales and Manufacturing – Supply Side Transactions.
Business event	A manufacturing and retail sales enterprise accepts sales orders from their call center, shows conducted in individual homes, and the enterprise Web site. These orders have a built in hold period of five business days prior to the order being shipped in case of cancellations or changes.
Actor(s)	
Primary	Customer, Customer Sales Representative.
Secondary	Order Management, Accounting (General Ledger), Shipping, Billing, Inventory.
Use case overview	The Order Management department receives a customer order. This department notifies the billing and shipping departments of the order and posts an account receivable on the general ledger. The shipping department updates the inventory system for the item(s) taken from inventory and shipped to the customer.

**Use case # SSD002 v1r3
(Continued)**

Add sales order

Preconditions

1. The ordered item is available within the current inventory and does not have to go on back order.
2. Systems containing the required information, whether for the order, billing or shipping as well as the general ledger system, are available at the time of request.
3. Requester is authorized to make the request of the various systems.
4. The customer is credit worthy for the billing of the item(s) ordered.

Postconditions

Success

The order is successfully placed with the Order Management department and billing and shipping are successfully accomplished. The item is posted to the General Ledger accounts receivable.

Failure

The process fails to complete due to incorrect placement of the order, system unavailability, lack of proper authorization on the part of some system user, or the item not being available from inventory. The process may fail at any point and be resolved for that point and fail later in the process. The ultimate failure to fulfill the salesorder means that some point of failure could not be resolved.

Table 1: Add sales order use case.

Use case description

Main scenario

1. A **customer** attends a home show displaying the products of the retail enterprise and places an order through the **customer representative** for three identical items. The **customer** arranges to be billed for the items and for that bill to come to their home.
2. The **customer representative** assembles the home show orders and enters them into the **Order Management system** from her home location using a remote link up. Typically, this activity takes place within a day of the home show.
3. The **Order Management department** receives the orders.
4. The **Order Management department** generates a notification of the item(s) order for the **Shipping department**.
5. The **Order Management** department generates the necessary information for billing with notification to the **Billing departments' system**.
6. An entry to **General Ledger** for the account receivable is created from the **Order Management department** and is posted to the General Ledger.
7. The shipping department obtains the item from inventory.
8. The **shipping department** generates an entry to the **inventory system** to reduce the number of item(s) in inventory by the number obtained for shipment.
9. The shipping department ships the item to the customer. A final check is made prior to shipping to ensure the five day wait period has passed from the origination of the order.

Business rules

The manufacturing and retail sales enterprise has the following operating rules:

1. A two week period is specified for the shipping of ordered items from the date of receipt by the Order Management department.
2. Bills are generated twice monthly, on the 15th and the 1st, for items that have been ordered and shipped. No bill is produced prior to shipment of the order.
3. Bill are to be clear, concise, and readable identifying the quantity and item(s) ordered.

These business rules are offered as a sample of some possible business rules that may surround sales order processing.

Traceability

SSD003 – Change Sales order

Inputs summary

The input summary will offer the data that is utilized by a number for OAG XML messages that process this use case. An attempt will be made to clarify data that originates with which message and to maintain, as much as possible, the order of the messages for the accomplishment of the use case. The messages utilized are:

1. Add Sales order (AS)
2. Sync Sales order (SO)
3. Post Journal (PJ)
4. Update Inventory (UI)

Where the initials are used signifies that the data is only used in that message and not any other message previously specified.

This input data is found in the Add Sales order and Sync Sales order messages:

Required sales order data

Sales Order Identification

Sales organization one

Synchronization Indicator (SO) – the synchronization indicator used will be an “A” for add since this is a new sales order.

Optional Header Data

Back order indicator

Buyer contract

Supplier contract

Cost center

Date time

Qualifier* – document (DOCUMENT)

Year

Month

Day

Hour

Minute

Second

Sub-second*

Time zone*

Department
Description
Distribution Center
Division
Export License
General Ledger entity source code
General Ledger nominal account code
Import license
Notes one through notes 99
Operation Amount
 Qualifier – extended (EXTENDED)
 Type – transactional
 Value
 Number of decimals
 Sign
 Currency
 Unit of measure value
 Unit of measure number of decimals
 Unit of measure
Operation amount authorization
Purchase order identifier
Purchase order line number
Sales organization 2 through sales organization 9
Shipping notes
Ship prior to due date flag
Site level 1 through site level 9
Sales order status
Tax withholding exemption
User Area
Partner data
 Name one
 One time indicator
 Partner identification
 Partner type

Optional Partner data

Currency

Description

Names two through nine

Partner identification cross reference information

Tax exemption status

Tax identification

User Area

Address

Address line one through nine

Address type

City

Country

County

Description

Fax telephone number one through nine

Postal Code

Region

State or Province

Tax jurisdiction

Telephone number one through nine

Uniform Resource Locator

User Area

Contact

Name one

Description

Email address

Fax telephone number one through nine

Name two through nine

Telephone number one through nine

User Area

Sales Person Information

Sales person

Amount

Qualifier – commission (COMMISSION) and Order (ORDER)

Type

Value

Number of decimals

Sign

Currency

Debit credit indicator

Quantity

Qualifier – commission (COMMISSION), Ordered (ORDERED),
and Percent (PERCENT)

Value

Number of decimals

Sign

Unit of measure

Sales organization one through nine

User Area

Sales Order Terms

Day of month

Number of days

Description

Operation Amount

Qualifier – Extended (EXTENDED)

Type

Value

Number of decimals

Sign

Currency

Unit of measure value

Unit of measure number of decimals

Unit of measure

Proximate month

Quantity

Qualifier – Percent (PERCENT)

Value

- Number of decimals
- Sign
- Unit of measure
- Term identification
- User Area
- Additional Charges
 - Charge identification
 - Operation Amount
 - Qualifier – Extended (EXTENDED)
 - Type
 - Value
 - Number of decimals
 - Sign
 - Currency
 - Unit of measure value
 - Unit of measure number of decimals
 - Unit of measure
 - Charge line number
 - Description
 - User area
- Distribution Information
 - Business area
 - Cost center
 - Department
 - Division
 - Element one through 999
 - Fund
 - Geography
 - General ledger entity source code
 - General ledger nominal account code
 - Operation Amount
 - Qualifier – Extended (EXTENDED)
 - Type
 - Value

- Number of decimals
- Sign
- Currency
- Unit of measure value
- Unit of measure number of decimals
- Unit of measure
- Profit center
- Project
- Unit
- User area
- Warehouse
- Sales Order and Schedule Line Information
 - Quantity
 - Qualifier – Ordered (ORDERED)
 - Value
 - Number of decimals
 - Sign
 - Unit of measure
 - Sales order line number
 - Back order indicator
 - Bill of Material alternative identification
 - Bill of Material identification code
 - Bill of material name
 - Bill of material revision
 - Bill of material status
 - Bill of material type
 - Bill of material usage
 - Buyer contract
 - Supplier contract
 - Date time
 - Qualifier* – Actual delivery date (DELIVACT), Scheduled delivery date (DELIVSCHED), Promised Delivery date (PROMDELV), Needed delivery date (NEEDELV), Promised Shipping date (PROMSHIP), and Ship date (SHIP)

- Year
- Month
- Day
- Hour
- Minute
- Second
- Sub-second*
- Time zone*
- Description
- Distribution center
- Drawing
- Drop shipment indicator
- Export license
- Hazardous material
- Import license
- Item
- Item revision
- Supplier item revision cross reference
- Supplier item identifier
- Lot level 1 through 2
- Notes 1 through 9
- Operation amount
 - Qualifier – Extended (EXTENDED) and Unit (UNIT)
 - Type – transactional
 - Value
 - Number of decimals
 - Sign
 - Currency
 - Unit of measure value
 - Unit of measure number of decimals
 - Unit of measure
- Packing
- Partial shipment allowed indicator
- Purchase order identification

- Purchase order line number
- Product line
- Project
- Property one through 99
- Routing identification
- Shipping notes
- Ship prior to due date flag
- Sales order line status
- Substitution allowed flag
- Tax withholding exemption indicator
- Temperature – temperature segment
 - Qualifier – Actual (ACTUAL), Delivery (DELIVERY), and Loading (LOADING)
 - Type
 - Value
 - Number of decimals
 - Sign
- Universal product code
- User Area
- Attached Reference
 - File name
 - Universal Resource Identifier (URI)
 - Compression type
 - Compression identification
 - Date time
 - Qualifier* – Creation (CREATION)
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Sub-second*
 - Time zone*

Description
File type
Notes 1 through 99
Quantity
 Qualifier – File size (FILESIZE)
 Value
 Number of decimals
 Sign
 Unit of measure
Title
User Area

The following input data is contained in the Post Journal message:

Required Journal Entry Header

General Ledger entity source code
Original reference identifier

Optional Journal Entry Header Information

Amount

 Qualifier – Document (DOCUMENT)
 Type – transactional
 Value
 Number of decimals
 Sign
 Currency
 Debit Credit indicator

Date time

 Qualifier * – Document (DOCUMENT) and Payroll period end (PAYEND)
 Year
 Month
 Day
 Hour
 Minute
 Second

Sub-second*
 Time zone*
 Description
 Document type*
 Journal entry identification
 Ledger
 User area
 User identification
 Journal Entry Line Information
 Amount
 Qualifier – Actual (ACTUAL)
 Type – transactional
 Value
 Number of decimals
 Sign
 Currency
 Debit Credit indicator
 General Ledger nominal account code
 Date time or
 Qualifier* – Accounting (ACCOUNTING)
 Year
 Month
 Day
 Hour
 Minute
 Second
 Sub-second*
 Time zone*
 Accounting Period or
 Accounting Year
 Business area
 Cost center
 Department
 Description

Division
Element 1 through 999
Fund
Geography
General Ledger entity destination code
Item
Product line
Product order
Profit center
Project activity
Project
Project resource element 1 through 9
Reason code
Reference 1 through 999
Sales order identification
Unit
User area
Warehouse
Work order
Attached Reference
File name
Universal Resource Identifier (URI)
Compression type
Compression identification
Date time
 Qualifier* – Creation (CREATION)
 Year
 Month
 Day
 Hour
 Minute
 Second
 Sub-second*
 Time zone*

Description
File type
Notes 1 through 99
Quantity
 Qualifier – File size (FILESIZE)
 Value
 Number of decimals
 Sign
 Unit of measure
Title
User Area

The following input data is contained in the Update Inventory message:

Required Inventory Information

Date time
 Qualifier* – Document (DOCUMENT)
 Year
 Month
 Day
 Hour
 Minute
 Second
 Sub-second*
 Time zone*

Item

Quantity
 Qualifier – Item (ITEM)
 Value
 Number of decimals
 Sign
 Unit of measure

Site level one through 2

Optional Inventory Information

Amount

- Qualifier – Item (ITEM)
- Type – transactional
- Value
- Number of decimals
- Sign
- Currency
- Debit Credit indicator
- Catch weight conversion
- Date time
 - Qualifier* – Effective (EFFECTIVE) and Expiration (EXPIRATION)
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Sub-second*
 - Time zone*
- Density factor
- Description
- General Ledger entity source code
- Inventory disposition
- Item revision
- Item status
- Lot level 1 and 2
- Name one through 9
- Notes 1 through 9
- Purchase order line number
- Purchaser order identification
- Property 1 through 99
- Quantity
 - Qualifier – Allocated (ALLOCATED), Lot size maximum (LOTSIZEMAX), Lot size minimum (LOTSIZEMIN), and Lot size multiple (LOTSIZEMLT)

- Value
- Number of decimals
- Sign
- Unit of measure
- Sales order identification
- Serial number
- Site level 3 through 9
- Sales order line number
- Temperature – temperature segment
 - Qualifier – Actual (ACTUAL), Delivery (DELIVERY), and Loading (LOADING)
 - Type
 - Value
 - Number of decimals
 - Sign
- Unit type
- User area
- Value class

Standard information in all of the messages is:

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

- Logical ID
- Component*
- Task
- Reference ID
- Confirmation
- Language
- Code page
- Authorization Identifier
- Date and Time
 - Qualifier*
 - Year
 - Month

Day
Hour
Minute
Second
Subsecond*
Time zone*

The use case anticipates the messages for input will be used in the following order:

1. Add Sales order (AS)
2. Sync Sales order (SO)
3. Post Journal (PJ)
4. Update Inventory

* Represents data elements not mapped to the IDM.

Output summary

The output data summary consists of confirmation that the various messages have been processed. The Conform BOD message will be utilized for this confirmation. The contents of this message are:

Confirm Message

Control Area consisting of message verb and noun along with the revision number of the message

Status level

Optional Confirm Data

Description

Original Reference Identifier

User Area

Optional Confirm Message Data

Description

Reason Code

User Area

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID

Component*

Task

Reference ID
Confirmation
Language
Code page
Authorization Identifier
Date and Time
 Qualifier*
 Year
 Month
 Day
 Hour
 Minute
 Second
 Subsecond*
 Time zone*

The use case anticipates receiving the Confirm BOD to indicate success or failure for the various input messages.

* Represents data elements not mapped to the IDM.

Change sales order

Use case # SSD003 V1R2 **Change sales order**

Subject area	Retail Sales and Manufacturing - Supply Side Transactions
Business event	A manufacturing and retail sales enterprise has accepted sales orders from their call center, shows conducted in individual homes, and the enterprise Web site. These orders have a built in hold period of five business days prior to the order being shipped in case of cancellations or changes. Changes to the these sales orders take place periodically.
Actor(s)	
Primary	Customer, Customer Sales Representative.
Secondary	Order Management, Accounting (General Ledger), Shipping, Billing, Inventory.
Use case overview	The Order Management department has receives a customer order that is in process. The customer desires to modify the order and contacts their customer sales representative to the modification. This department notifies the billing and shipping departments of the order change and posts an account receivable on the general ledger reflecting the change. The shipping department updates the inventory system for the item(s) taken from inventory and shipped to the customer.

Use case # SSD003 V1R2 Change sales order
(Continued)

Preconditions	<ol style="list-style-type: none"> 1. An order has previously been placed with the enterprise. 2. The change to the order is an actual change that is it is not a cancellation of the prior order and addition of a new order. Examples may be a change in quantity, color, etc. 3. The ordered item is available within the current inventory and does not have to go on back order. 4. Systems containing the required information, whether for the order, billing or shipping as well as the general ledger system, are available at the time of request. 5. Requester is authorized to make the request of the various systems. 6. The customer is credit worthy for the billing of the item(s) ordered.
Postconditions	
Success	The order changed is successfully placed with the Order Management department and billing and shipping are successfully accomplished. The item is posted to the General Ledger accounts receivable.
Failure	The process fails to complete due to incorrect placement of the order, system unavailability, lack of proper authorization on the part of some system user, or the item not being available from inventory. The process may fail at any point and be resolved for that point and fail later in the process. The ultimate failure to fulfill the sales order means that some point of failure could not be resolved.

Table 2: Change sales order use case.

Use case description

Main scenario

1. A **customer** attends a home show displaying the products of the retail enterprise and places an order through the **customer representative** for three identical items. The **customer** arranges to be billed for the items and for that bill to come to their home.
2. The **customer representative** assembles the home show orders and enters them into the **Order Management system** from her home location using a remote link up. Typically, this activity takes place within a day of the home show.
3. The **Order Management department** has received the orders, and generated a notification of the item(s) order for the **Shipping department**. In addition, Order Management has notified the **Billing department** and the **Accounting department** with a posting to the General Ledger. *Note that the first three steps relate in summary what is found in the Add Sales order use case. The actual scenario for the Change Sales order begins in step 4.*
4. The **customer sales representative** is contacted by the **customer** with a change to the order that has been placed.
5. The **customer sales representative** notified **Order Management** using his/her remote link.
6. Order management receives the change of the order.
7. The **Order Management department** generates a notification of the change for the item(s) ordered for the **Shipping department**.
8. The **Order Management department** generates the necessary information regarding the change for billing with notification to the **Billing departments' system**.
9. An entry to **General Ledger** for the account receivable is created from the **Order Management** department reflecting the changed order and is posted to the General Ledger.
10. The shipping department obtains the item from inventory.
11. The **shipping department** generates an entry to the **inventory system** to reduce the number of item(s) in inventory by the number obtained for shipment.
12. The **shipping department** ships the item to the **customer**. A final check is made prior to shipping to ensure the five day wait period has passed from the origination of the order.

Business rules

The manufacturing and retail sales enterprise has the following operating rules:

1. A two week period is specified for the shipping of ordered items from the date of receipt by the Order Management department.
2. Bills are generated twice monthly, on the 15th and the 1st, for items that have been ordered and shipped. No bill is produced prior to shipment of the order.
3. Bill are to be clear, concise, and readable identifying the quantity and item(s) ordered.

These business rules are offered as a sample of some possible business rules that may surround sales order processing.

Traceability

SSD002 – Add Sales order.

Inputs summary

The input summary will offer the data that is utilized by a number for OAG XML messages that process this use case. An attempt will be made to clarify data that originates with which message and to maintain, as much as possible, the order of the messages for the accomplishment of the use case. The messages utilized are:

1. Change Sales order (CS)
2. Sync Sales order (SO)
3. Post Journal (PJ)
4. Update Inventory (UI)

Where the initials are used signifies that the data is only used in that message and not any other message previously specified.

This input data is found in the Add Sales order and Sync Sales order messages:

Required sales order data

Sales Order Identification – required to be the same identification code as the original order.

Sales organization one

Synchronization Indicator (SO) – the synchronization indicator used will be an “C” for change since this is a change to an existing sales order.

Optional Header Data

Back order indicator

Buyer contract

Supplier contract

Cost center
Date time
 Qualifier* – document (DOCUMENT)
 Year
 Month
 Day
 Hour
 Minute
 Second
 Sub-second*
 Time zone*
Department
Description
Distribution Center
Division
Export License
General Ledger entity source code
General Ledger nominal account code
Import license
Notes one through notes 99
Operation Amount
 Qualifier – extended (EXTENDED)
 Type – transactional
 Value
 Number of decimals
 Sign
 Currency
 Unit of measure value
 Unit of measure number of decimals
 Unit of measure
Operation amount authorization
Purchase order identifier
Purchase order line number
Sales organization 2 through sales organization 9

Shipping notes
Ship prior to due date flag
Site level 1 through site level 9
Sales order status
Tax withholding exemption
User Area

Partner data

Name one
One time indicator
Partner identification
Partner type

Optional Partner data

Currency
Description
Names two through nine
Partner identification cross reference information
Tax exemption status
Tax identification
User Area

Address

Address line one through nine
Address type
City
Country
County
Description
Fax telephone number one through nine
Postal Code
Region
State or Province
Tax jurisdiction
Telephone number one through nine
Uniform Resource Locator
User Area

Contact

- Name one
- Description
- Email address
- Fax telephone number one through nine
- Name two through nine
- Telephone number one through nine
- User Area

Sales Person Information

- Sales person
- Amount
 - Qualifier – commission (COMMISSION) and Order (ORDER)
 - Type
 - Value
 - Number of decimals
 - Sign
 - Currency
- Debit credit indicator
- Quantity
 - Qualifier – commission (COMMISSION), Ordered (ORDERED), and Percent (PERCENT)
 - Value
 - Number of decimals
 - Sign
 - Unit of measure
- Sales organization one through nine
- User Area

Sales Order Terms

- Day of month
- Number of days
- Description
- Operation Amount
 - Qualifier – Extended (EXTENDED)
 - Type

- Value
- Number of decimals
- Sign
- Currency
- Unit of measure value
- Unit of measure number of decimals
- Unit of measure
- Proximate month
- Quantity
 - Qualifier – Percent (PERCENT)
 - Value
 - Number of decimals
 - Sign
 - Unit of measure
- Term identification
- User Area
- Additional Charges
 - Charge identification
 - Operation Amount
 - Qualifier – Extended (EXTENDED)
 - Type
 - Value
 - Number of decimals
 - Sign
 - Currency
 - Unit of measure value
 - Unit of measure number of decimals
 - Unit of measure
 - Charge line number
 - Description
 - User area
- Distribution Information
 - Business area
 - Cost center

- Department
- Division
- Element one through 999
- Fund
- Geography
- General ledger entity source code
- General ledger nominal account code
- Operation Amount
 - Qualifier – Extended (EXTENDED)
 - Type
 - Value
 - Number of decimals
 - Sign
 - Currency
 - Unit of measure value
 - Unit of measure number of decimals
 - Unit of measure
- Profit center
- Project
- Unit
- User area
- Warehouse
- Sales Order and Schedule Line Information
 - Quantity
 - Qualifier – Ordered (ORDERED)
 - Value
 - Number of decimals
 - Sign
 - Unit of measure
 - Sales order line number – required to be the same as the original order which is being changed.
 - Back order indicator
 - Bill of Material alternative identification
 - Bill of Material identification code

Bill of material name
 Bill of material revision
 Bill of material status
 Bill of material type
 Bill of material usage
 Buyer contract
 Supplier contract
 Date time
 Qualifier* – Actual delivery date (DELIVACT), Scheduled delivery date (DELIVSCHED), Promised Delivery date (PROMDELV), Needed delivery date (NEEDEDELV), Promised Shipping date (PROMSHIP), and Ship date (SHIP)
 Year
 Month
 Day
 Hour
 Minute
 Second
 Sub-second*
 Time zone*
 Description
 Distribution center
 Drawing
 Drop shipment indicator
 Export license
 Hazardous material
 Import license
 Item
 Item revision
 Supplier item revision cross reference
 Supplier item identifier
 Lot level 1 through 2
 Notes I through 9
 Operation amount

- Qualifier – Extended (EXTENDED) and Unit (UNIT)
- Type – transactional
- Value
- Number of decimals
- Sign
- Currency
- Unit of measure value
- Unit of measure number of decimals
- Unit of measure
- Packing
- Partial shipment allowed indicator
- Purchase order identification
- Purchase order line number
- Product line
- Project
- Property one through 99
- Routing identification
- Shipping notes
- Ship prior to due date flag
- Sales order line status
- Substitution allowed flag
- Tax withholding exemption indicator
- Temperature – temperature segment
 - Qualifier – Actual (ACTUAL), Delivery (DELIVERY), and Loading (LOADING)
 - Type
 - Value
 - Number of decimals
 - Sign
- Universal product code
- User Area
- Attached Reference
 - File name
 - Universal Resource Identifier (URI)

Compression type
Compression identification
Date time
 Qualifier* – Creation (CREATION)
 Year
 Month
 Day
 Hour
 Minute
 Second
 Sub-second*
 Time zone*
Description
File type
Notes 1 through 99
Quantity
 Qualifier – File size (FILESIZE)
 Value
 Number of decimals
 Sign
 Unit of measure
Title
User Area

The following input data is contained in the Post Journal message:

Required Journal Entry Header
 General Ledger entity source code
 Original reference identifier
Optional Journal Entry Header Information
 Amount
 Qualifier – Document (DOCUMENT)
 Type – transactional
 Value
 Number of decimals

- Sign
- Currency
- Debit Credit indicator
- Date time
 - Qualifier*– Document (DOCUMENT) and Payroll period end (PAYEND)
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Sub-second*
 - Time zone*
- Description
- Document type*
- Journal entry identification
- Ledger
- User area
- User identification
- Journal Entry Line Information
 - Amount
 - Qualifier – Actual (ACTUAL)
 - Type – transactional
 - Value
 - Number of decimals
 - Sign
 - Currency
 - Debit Credit indicator
 - General Ledger nominal account code
 - Date time or
 - Qualifier *– Accounting (ACCOUNTING)
 - Year
 - Month

Day
Hour
Minute
Second
Sub-second*
Time zone*
Accounting Period or
Accounting Year
Business area
Cost center
Department
Description
Division
Element 1 through 999
Fund
Geography
General Ledger entity destination code
Item
Product line
Product order
Profit center
Project activity
Project
Project resource element 1 through 9
Reason code
Reference 1 through 999
Sales order identification
Unit
User area
Warehouse
Work order
Attached Reference
File name
Universal Resource Identifier (URI)

Compression type
Compression identification
Date time
 Qualifier* – Creation (CREATION)
 Year
 Month
 Day
 Hour
 Minute
 Second
 Sub-second*
 Time zone*
Description
File type
Notes 1 through 99
Quantity
 Qualifier – File size (FILESIZE)
 Value
 Number of decimals
 Sign
 Unit of measure
Title
User Area

The following input data is contained in the Update Inventory message:

Required Inventory Information

Date time
 Qualifier* – Document (DOCUMENT)
 Year
 Month
 Day
 Hour
 Minute
 Second

- Sub-second*
- Time zone*
- Item
- Quantity
 - Qualifier – Item (ITEM)
 - Value
 - Number of decimals
 - Sign
 - Unit of measure
- Site level one through 2
- Optional Inventory Information
 - Amount
 - Qualifier – Item (ITEM)
 - Type – transactional
 - Value
 - Number of decimals
 - Sign
 - Currency
 - Debit Credit indicator
 - Catch weight conversion
 - Date time
 - Qualifier*– Effective (EFFECTIVE) and Expiration (EXPIRATION)
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Sub-second*
 - Time zone*
 - Density factor
 - Description
 - General Ledger entity source code
 - Inventory disposition

Item revision
Item status
Lot level 1 and 2
Name one through 9
Notes 1 through 9
Purchase order line number
Purchaser order identification
Property 1 through 99
Quantity
 Qualifier – Allocated (ALLOCATED), Lot size maximum (LOTSIZEMAX), Lot size minimum (LOTSIZEMIN), and Lot size multiple (LOTSIZEMLT)
 Value
 Number of decimals
 Sign
 Unit of measure
 Sales order identification
 Serial number
 Site level 3 through 9
 Sales order line number
Temperature – temperature segment
 Qualifier – Actual (ACTUAL), Delivery (DELIVERY), and Loading (LOADING)
 Type
 Value
 Number of decimals
 Sign
Unit type
User area
Value class

Standard information in all of the messages is:

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

- Logical ID
- Component*
- Task
- Reference ID
- Confirmation
- Language
- Code page
- Authorization Identifier
- Date and Time
 - Qualifier
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Subsecond
 - Time zone

The use case anticipates the messages for input will be used in the following order:

1. Change Sales order (CS)
2. Sync Sales order (SO)
3. Post Journal (PJ)
4. Update Inventory

* Represents data elements not mapped to the IDM.

Output summary

The output data summary consists of confirmation that the various messages have been processed. The Confirm BOD message will be utilized for this confirmation. The contents of this message are:

Confirm Message

Control Area consisting of message verb and noun along with the revision number of the message

Status level

Optional Confirm Data

Description

Original Reference Identifier

User Area

Optional Confirm Message Data

Description

Reason Code

User Area

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID

Component

Task

Reference ID

Confirmation

Language

Code page

Authorization Identifier

Date and Time

Qualifier*

Year

Month

Day

Hour

Minute

Second
Subsecond*
Time zone*

The use case anticipates receiving the Confirm BOD to indicate success or failure for the various input messages.

* Represents data elements not mapped to the IDM.

Get credit

Use Case #CRM004 v1r2 Get credit

Subject area	Retail Sales and Manufacturing – CRM Transactions.
Business event	Internal order management staff as well as the customer call center periodically have to verify the available credit for purchasers and must access the credit rating system held by the accounts receivable system.
Actor(s)	
Primary	Internal order management staff, customer call center.
Secondary	Retail stores, Manufacturing enterprise, Customer(s), Customer Management, Accounting Personnel, Order Management, Accounts Receivable, External System.
Use case overview	Internal retail sales and manufacturing order management staff as well as the customer call center periodically must verify customer or retail store available credit. The intent of this qualification is to verify the capacity for additional purchases on credit.

**Use Case #CRM004 v1r2
(Continued)**

Get credit

Preconditions	<ol style="list-style-type: none">1. Internal staff or external persons have established the customer in the appropriate systems.2. A line of credit has been created for the customer or retail location and is maintained within the accounts receivable system.3. Customer information integrity is valid throughout the entered systems.4. Systems containing the customer information are available at the time of the request.5. Requester (and or requesting system) has the proper authorization to make the request to obtain the customer or retail location credit information.
Postconditions	
Success	The request to obtain the customer or retail location credit data is processed successfully and the required credit data is returned to the originating system or originating person. The credit data returned may indicate that no credit is available at the current time.
Failure	The request failed to process due to the system being unavailable, lack of authorization on the part of the requesting system or person, or the customer information not being a part of the target system(s).

Table 3: Get credit use case.

Use case description

Main scenario

1. Call center or order management, requisition, or other internal staff recognize the need to access a particular customer's available credit.
2. The appropriate access system (internal system terminal or web site access) is entered to obtain the required information. (This step is the sign on authentication for the front-end access required for the accessing system. It is part of the sequenced flow, but not a part of this use case as typically this transaction is accomplished early in the day for multiple reasons.)
3. The required entry data is entered into the front-end system to obtain the credit information for the particular customer or retail sales location. (See Inputs Summary for request data)
4. The customer or retail sales location credit data is either successfully returned to the requestor or fails in the return. If a failure occurs, appropriate action to remedy the situation causing the failure is taken. If a successful return is received, the data is utilized by the requesting person to fulfill the acquisition need.

Business rules

The manufacturing enterprise operates within the boundaries of the following rules:

1. Customers are added to the two existing customer systems.
2. The customer data must be maintained as identical within the customer type on both systems.
3. The two systems are Customer Management System and External System.
4. Available credit is located and maintained on the Accounts Receivable System being updated by order activity.

Inputs summary

The input data is primarily represented by the requesting information that is required to obtain the customer or retail location available credit data record. (This data is located in the Open Application Group Get Credit XML message.)

The data representing customers is held as partner data and is characterized by partner type. (Data definitions are contained in the GET_Credit_DED Excel spreadsheet.) The data is:

Partner Data (required for the request on the Get Credit message)

Partner ID

Additional Required Information

General Ledger Entity Source Code

Document Date Segment (Date/time Qualifier in XML message)

Year

Month

Day

Hour

Minute

Second

Subsecond

Time zone

Optional Message for the Get Credit transaction

Accounting Period

Accounting Year

Amount of Current Order

Type

Value

Number of Decimals

Sign

Currency

Debit or Credit

Currency

Effective Date Segment (date/time qualifier in XML message)

Year

Month

Day

Hour

Minute

Second

Subsecond

Time zone

Description

Document type*

Ledger

Name from 1 to 9

Partner Type

User Area

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID

Component

Task

Reference ID

Confirmation

Language

Code page

Authorization Identifier

Date and Time

Qualifier* – “creation” is the date/time qualifier in the XML message

Year

Month

Day

Hour

Minute

Second

Subsecond*

Time zone*

* Represents data elements not mapped to the IDM.

Output summary

The output data represents the response data that is returned from the target system. It is contained in the Show Credit XML message, and the Confirm BOD XML message. The data is:

Partner Data (required for Show Credit message)

Partner ID*

Additional Required Data

Current Amount Available (qualifier in XML message)

Type

Value
 Number of Decimals
 Sign
 Currency
 Debit or Credit
 General Ledger Entity Source Code
 Approval Indicator Code
 Optional Data that may be returned in Show Credit Message
 Amount of Orders Approved but not yet invoiced (qualifier in XML message)
 Type
 Value
 Number of Decimals
 Sign
 Currency
 Debit or Credit
 Current Amount of Available Credit (qualifier in XML message)
 Type
 Value
 Number of Decimals
 Sign
 Currency
 Debit or Credit
 Amount of items that have been invoiced but remain currently unpaid (qualifier in XML message)
 Type
 Value
 Number of Decimals
 Sign
 Currency
 Debit or Credit
 Amount of any Current Orders (qualifier in XML message)
 Type
 Value

Number of Decimals
 Sign
 Currency
 Debit or Credit
 Credit Limit Amount of an Single Sales Order (qualifier in XML message)
 Type
 Value
 Number of Decimals
 Sign
 Currency
 Debit or Credit
 Total Credit Limit Amount for a sales partner (qualifier in XML message)
 Type
 Value
 Number of Decimals
 Sign
 Currency
 Debit or Credit
 Effective Date Segment (qualifier in XML message)
 Year
 Month
 Day
 Hour
 Minute
 Second
 Subsecond
 Time zone
 Description
 Business Partner Rating
 User Area
 Sender Information – data coming from the source system that is contained
 in the XML message (makes up a portion of the Control Area of this portion of
 the XML message)
 Logical ID

- Component*
- Task
- Reference ID
- Confirmation
- Language
- Code page
- Authorization Identifier
- Date and Time
 - Qualifier*
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Subsecond*
 - Time zone*
- Confirm Message
 - Control Area consisting of message verb and noun along with the revision number of the message
 - Status level
- Optional Confirm Data
 - Description
 - Original Reference Identifier
 - User Area
- Optional Confirm Message Data
 - Description
 - Reason Code
 - User Area

* Represents data elements not mapped to the IDM.

Get customer

Use Case #CRM003 v1r3	Get customer
Subject area	Retail Sales and Manufacturing – CRM Transactions.
Business event	Internal staff have the need to access the customer(s) database that exist on multiple systems within the retail sales and manufacturing enterprise.
Actor(s)	
Primary	Internal staff within Order Management, Call Center.
Secondary	Manufacturing enterprise, Customer(s), Customer Management, External System.
Use case overview	Internal retail sales and manufacturing staff periodically must verify customers that exist on multiple systems or obtain customer information from those systems. In addition, the call center must inquire for various customer data to obtain their current status within the manufacturing and retail sales enterprise.
Preconditions	<ol style="list-style-type: none">1. Internal staff or external persons have established the customer in the appropriate systems.2. Customer information integrity is valid throughout the entered systems.3. Systems containing the customer information are available at the time of the request.4. Requester (and or requesting system) has the proper authorization to make the request to obtain the customer information.

**Use Case #CRM003 v1r3 Get customer
(Continued)**

Postconditions

Success	The request to obtain the customer data is processed successfully and the required data is returned to the originating system or originating person.
Failure	The request failed to process due to the system being unavailable, lack of authorization on the part of the requesting system or person, or the customer information not being a part of the target system(s).

Table 4: Get customer use case.

Use case description

Main scenario

1. Call center or order management, requisition, or other internal staff recognizes the need to access a particular customer.
2. The appropriate access system (internal system terminal or web site access) is entered to obtain the required information. (This step is the sign on authentication for the front-end access required for the accessing system. It is part of the sequenced flow, but not a part of this use case as typically this transaction is accomplished early in the day for multiple reasons.)
3. The required entry data is entered into the front-end system to obtain the information for the particular customer. (See Inputs Summary for request data)
4. The customer is confirmed by each of the two existing systems within the manufacturing enterprise. (See Business Rules) If this confirmation fails, the customer data in one of the systems may have to be maintained or the record added in order to maintain the customer data integrity. (If so, please utilize the Sync Add, Change, Replace, Delete Customer Use Case for that transaction.)
5. The customer data is either successfully returned to the requestor or fails in the return. If a failure occurs, appropriate action to remedy the situation causing the failure is taken. If a successful return is received, the data is utilized by the requesting person to fulfill the acquisition need.

Business rules

The manufacturing enterprise operates within the boundaries of the following rules:

1. Customers are added to the two existing customer systems.
2. The customer data must be maintained as identical within the customer type on both systems.
3. The two systems are Customer Management System and External System.

Traceability

CRM002 Sync Add, Change, Replace, Delete Customer Use Case

Inputs summary

The input data is primarily represented by the requesting information that is required to obtain the customer data record and to insure the customer record integrity among systems. (This data is located in the Open Application Group Get Customer XML message.)

The data representing customers is held as partner data and is characterized by partner type. (Data definitions are contained in the GET_Customer_DED Excel spreadsheet.) The data is:

Partner Data (this data is all that is required for the request on the Get Customer message)

Name 1

Partner ID

Partner Type

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID

Component*

Task

Reference ID

Confirmation

Language

Code page

Authorization Identifier

Date and Time

Qualifier*

Year
Month
Day
Hour
Minute
Second
Subsecond*
Time zone*

Synchronization Indicator

* Represents data elements not mapped to the IDM.

Output summary

The output data represents the response data that is returned from the target system. It is contained in the Show Customer XML message and the Confirm BOD XML message. The data is:

Partner Data (this data is all that is required for the request on the Get Customer message)

Name 1
Partner ID
Partner Type

Sender Information – data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID
Component*
Task
Reference ID
Confirmation
Language
Code page
Authorization Identifier

Date and Time

Qualifier*
Year
Month

Day
Hour
Minute
Second
Subsecond*
Time zone*

Additional Partner Data

Active Status Indicator
Currency
Description
Dun and Bradstreet Identifier
General Ledger entity source code
Additional Names up to nine occurrences
Business Partner Parent Identifier
Cross Referenced Business Partner Identifier
Business Partner Rating
Business Partner Role
Payment Method
Tax Exemption Status
Tax Identifier
Term Identifier

Address Data

Address: Lines 1 through 9
Address Type
City
Country
County
Description
Fax Telephone Numbers 1 through 9
Postal Code
Region
State or Province
Tax Jurisdiction
Telephone Numbers 1 through 9

- Uniform Resource Locator (URL)
- User Area
- Contact Data
 - Name 1
 - Contact Type
 - Description
 - Email address
 - Fax telephone numbers 1 through 9
 - Names 1 through 9
 - Telephone numbers 1 through 9
 - User Area
- Attached Reference Data
 - File name
 - Universal Resource Identifier (URI)
- Additional Reference Data
 - Compression Type
 - Compression File Identifier
 - Creation data and time – see Date and Time in Input Summary
 - File Type
 - Notes 1 through 9
 - Quantity or File Size
 - Qualifier
 - Value
 - Number of Decimals
 - Sign
 - Unit of Measure
 - User Area
- Confirm Message
 - Control Area consisting of message verb and noun along with the revision number of the message
 - Status level
- Optional Confirm Data
 - Description
 - Original Reference Identifier

User Area
Optional Confirm Message Data
Description
Reason Code
User Area

* Represents data elements not mapped to the IDM.

Get supplier

Use Case #CRM001 v1r3 Get supplier

Subject area	Retail Sales and Manufacturing – CRM Transactions.
Business event	Internal, requisition staff have the need to access the available supplier(s) that exist on multiple systems within the retail sales and manufacturing enterprise.
Actor(s)	
Primary	Requisition staff within Order Management, Call Center.
Secondary	Manufacturing enterprise, Supplier(s), Supplier Management, External System.
Use case overview	Order management requisition staff as well as retail sales staff periodically must verify suppliers that exist on multiple systems or obtain supplier information from those systems. In addition, the call center must inquire for various suppliers to obtain their current status with the manufacturing and retail sales enterprise.

Use Case #CRM001 v1r3 Get supplier
(Continued)

Preconditions	<ol style="list-style-type: none">1. Supply management has established the supplier in the appropriate systems.2. Supplier information integrity is valid throughout the entered systems.3. Systems containing the supplier information are available at the time of the request.4. Requester (and or requesting system) has the proper authorization to make the request to obtain the supplier information.
Postconditions	
Success	The request to obtain the supplier data is processed successfully and the required data is returned to the originating system or originating person.
Failure	The request failed to process due to the system being unavailable, lack of authorization on the part of the requesting system or person, or the supplier information not being a part of the target system(s).

Table 5: Get supplier use case.

Use case description

Main scenario

1. Call center or order management, requisition staff recognize the need to access a particular supplier.
2. The appropriate access system (internal system terminal or web site access) is entered to obtain the required information. (This step is the sign on authentication for the front-end access required for the accessing system. It is part of the sequenced flow, but not a part of this use case as typically this transaction is accomplished early in the day for multiple reasons.)
3. The required entry data is entered into the front-end system to obtain the information for the particular supplier. (See Inputs Summary for request data)

4. The supplier is confirmed by each of the two existing systems within the manufacturing enterprise. (See Business Rules) If this confirmation fails, the supplier data in one of the systems may have to be maintained or added in order to maintain the supplier data integrity. (If so, please utilize the Sync Add, Change, Replace, Delete Supplier Use Case for that transaction.)
5. The supplier data is either successfully returned to the requestor or fails in the return. If a failure occurs, appropriate action to remedy the situation causing the failure is taken. If a successful return is received, the data is utilized by the requesting person to fulfill the acquisition need.

Business rules

The manufacturing enterprise operates within the boundaries of the following rules:

1. Suppliers are added to the two existing supplier systems.
2. The supplier data must be maintained as identical within the supplier type on both systems.
3. The two systems are Supplier Management System and External System.

Traceability

CRM005 Sync Add, Change, Replace, Delete Supplier Use Case

Inputs summary

The input data is primarily represented by the requesting information that is required to obtain the supplier data record and to insure the supplier record integrity among systems. (This data is located in the Open Application Group Get Supplier XML messages.)

The data representing suppliers is held as partner data and is characterized by partner type. (Data definitions are contained in the GET_Supplier_DED Excel spreadsheet.) The data is:

Partner Data (this data is all that is required for the request on the Get Supplier message)

Name 1

Partner ID

Partner Type

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID

Component
Task
Reference ID
Confirmation
Language
Code page
Authorization Identifier
Date and Time
Qualifier*
Year
Month
Day
Hour
Minute
Second
Subsecond*
Time zone*

* Represents data elements not mapped to the IDM.

Output summary

The output data represents the response data that is returned from the target system. It is contained in the Show Supplier XML message, and the Confirm BOD XML message. The data is:

Partner Data (this data is all that is required for the request on the Get Supplier message)

Name 1
Partner ID
Partner Type

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID
Component*
Task
Reference ID

- Confirmation
- Language
- Code page
- Authorization Identifier
- Date and Time
 - Qualifier*
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Subsecond*
 - Time zone*
- Additional Partner Data
 - Active Status Indicator
 - Currency
 - Description
 - Dun and Bradstreet Identifier
 - General Ledger entity source code
- Additional Names up to nine occurrences
 - Business Partner Parent Identifier
 - Cross Referenced Business Partner Identifier
 - Business Partner Rating
 - Business Partner Role
 - Payment Method
 - Tax Exemption Status
 - Tax Identifier
 - Term Identifier
- Address Data
 - Address :Lines 1 through 9
 - Address Type
 - City
 - Country

- County
- Description
- Fax Telephone Numbers 1 through 9
- Postal Code
- Region
- State or Province
- Tax Jurisdiction
- Telephone Numbers 1 through 9
- Uniform Resource Locator (URL)
- User Area
- Contact Data
 - Name 1
 - Contact Type
 - Description
 - Email address
 - Fax telephone numbers 1 through 9
 - Names 1 through 9
 - Telephone numbers 1 through 9
 - User Area
- Attached Reference Data
 - File name
 - Universal Resource Identifier (URI)
- Additional Reference Data
 - Compression Type
 - Compression File Identifier
 - Creation data and time – see Date and Time in Input Summary
 - File Type
 - Notes 1 through 9
 - Quantity or File Size
 - Qualifier
 - Value
 - Number of Decimals
 - Sign
 - Unit of Measure

User Area

Confirm Message

Control Area consisting of message verb and noun along with the revision number of the message

Status level

Optional Confirm Data

Description

Original Reference Identifier

User Area

Optional Confirm Message Data

Description

Reason Code

User Area

* Represents data elements not mapped to the IDM.

Add customer (sync customer message in OAG XML)

Use Case #CRM002 v1r2	Add customer (sync customer XML message in OAG)
Subject area	Retail Sales and Manufacturing – CRM Transactions.
Business event	Internal retail sales, manufacturing, and call center staff have the need to add new customer(s) to the existing customer databases on a daily basis. These additions may arise from phone contact, WEB site access, or personal contact with the new customers. Typically, these new customer additions are a prelude to further transactions.
Actor(s)	
Primary	Internal staff within Retail Sales locations, Order Management, Call Center, Customer Party.
Secondary	Manufacturing and retail sales enterprise, Customer(s), Customer Management, External System.
Use case overview	Internal retail sales, call center and manufacturing staff frequently have new customer contact and must add these customers to the enterprise's, multiple systems that contain customer information. These new customer contacts are sometimes facilitate by the customer accessing the enterprise' Web site and adding the requested information.
Preconditions	<ol style="list-style-type: none"> 1. Systems containing the customer information are available at the time of the addition request. 2. Requester (and or requesting system) has the proper authorization to make the request to obtain the customer information. 3. Correct information is available for the addition of the new customer.

Use Case #CRM002 v1r2 (Continued)	Add customer (sync customer XML message in OAG)
Postconditions	
Success	The request to add the customer data is processed successfully and the required data is confirmed to the originating system or originating person.
Failure	The request failed to process due to the system being unavailable, lack of authorization on the part of the requesting system or person, or the customer information being insufficient to become a part of the target system(s).

Table 6: Add customer use case.

Use case description

Main scenario

1. Call center or order management, requisition, or other internal staff have contact with a new customer (one that is not in the customer databases maintained by the enterprise).
2. The appropriate access system (internal system terminal or web site access) is entered to obtain the required information. (This step is the sign on authentication for the front-end access required for the accessing system for internal personnel of the enterprise. It is part of the sequenced flow, but not a part of this use case as typically this transaction is accomplished early in the day for multiple reasons. Access may be by the customer at the enterprise Web site).
3. The required entry data is entered into the front-end system to add the required and or optional information for the new customer (See Inputs Summary for request data).
4. Entry is made into each of enterprise systems for the new customer(s). (Currently, two such systems exist).
5. The customer addition is confirmed by each of the two existing systems within the manufacturing enterprise (See Business Rules). If this confirmation fails, the customer data in one of the systems may have to be re-added in order to maintain the enterprise required customer data integrity.

6. The customer data is either successfully added to the target system or fails to be added. If a failure occurs, appropriate action to remedy the situation causing the failure is taken. If a successful return is received, subsequent transactions may then be pursued for the newly added customer.

Business rules

The manufacturing enterprise operates within the boundaries of the following rules:

1. Customers are added to the two existing customer systems.
2. The customer data must be maintained as identical within the customer type on both systems.
3. The two systems are Customer Management System and External System.

Traceability

CRM003 Get Customer Use Case

Inputs summary

The input data is primarily represented by the added information that is required to add the customer data record. (This data is located in the Open Application Group Sync Customer XML message. See notes below for more information on this message)

The data representing customers is held as partner data and is characterized by partner type. (Data definitions are contained in the Sync_Customer_DED Excel spreadsheet.) The data is:

Partner Data (this data is all that is required for the request on the Get Customer message)

Name 1

Partner ID*

Partner Type

One time: indicates the information is established only for a particular transaction

Synchronization Indicator: indicates the type of transaction that is being performed, i.e. "A" for add, "C" for change, "D" for delete, and "R" for replace

Additional Partner Data

Active Status Indicator

Currency

Description

- Dun and Bradstreet Identifier
- General Ledger entity source code
- Additional Names up to nine occurrences
- Business Partner Parent Identifier
- Cross Referenced Business Partner Identifier
- Business Partner Rating
- Business Partner Role
 - Payment Method
 - Tax Exemption Status
 - Tax Identifier
 - Term Identifier
- Address Data
 - Address :Lines 1 through 9
 - Address Type
 - City
 - Country
 - County
 - Description
 - Fax Telephone Numbers 1 through 9
 - Postal Code
 - Region
 - State or Province
 - Tax Jurisdiction
 - Telephone Numbers 1 through 9
 - Uniform Resource Locator (URL)
 - User Area
- Contact Data
 - Name 1
 - Contact Type
 - Description
 - Email address
 - Fax telephone numbers 1 through 9
 - Names 1 through 9
 - Telephone numbers 1 through 9

- User Area
- Attached Reference Data
 - File name
 - Universal Resource Identifier (URI)
- Additional Reference Data
 - Compression Type
 - Compression File Identifier
 - Creation data and time – see Date and Time in Input Summary
 - File Type
 - Notes 1 through 9
 - Quantity or File Size
 - Qualifier
 - Value
 - Number of Decimals
 - Sign
 - Unit of Measure
- User Area
- Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)
 - Logical ID
 - Component*
 - Task
 - Reference ID
 - Confirmation
 - Language
 - Code page
 - Authorization Identifier
- Date and Time
 - Qualifier
 - Year
 - Month
 - Day
 - Hour

Minute
Second
Subsecond*
Time zone*

* Represents data elements not mapped to the IDM.

Output summary

The output data represents the response data that is returned from the target system. It is contained in the Confirm BOD XML message. The data is:

Confirm Message

Control Area consisting of message verb and noun along with the revision number of the message

Status level

Optional Confirm Data

Description

Original Reference Identifier

User Area

Optional Confirm Message Data

Description

Reason Code

User Area

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID

Component*

Task

Reference ID

Confirmation

Language

Code page

Authorization Identifier

Date and Time

Qualifier*

Year

Month
Day
Hour
Minute
Second
Subsecond*
Time zone*

* Represents data elements not mapped to the IDM.

Use case notes

The Sync Customer XML messages has a variety of uses with the concept of being a “push” transaction that will maintain data integrity across systems. The same data is present in all of its uses that are add, change, replace and delete. This use case may be thus extended to cover the other functions provided by the Sync Customer message of change, replace, and delete through the use of the synchronization indicator to alter the message’ purpose.

Add supplier (sync supplier message in OAG XML)

Use Case #CRM005 v1r2	Add supplier (sync supplier message in OAG XML)
Subject area	Retail Sales and Manufacturing – CRM Transactions.
Business event	Internal, requisition staff commonly have the need to add new suppliers to the existing databases of suppliers maintained within the retail sales and manufacturing enterprise. These suppliers must be added so that they are accessible on multiple systems so that both local and regional orders may be placed.
Actor(s)	
Primary	Requisition staff within Order Management, Regional order staff.
Secondary	Manufacturing enterprise, Supplier(s), Supplier Management, External System.
Use case overview	Order management requisition staff as well as regional order staff periodically must add new suppliers to the multiple systems within the enterprise. Generally, these new suppliers are added following approval by the supply management area of the enterprise. The focus of this use case is upon the addition of the new suppliers.
Preconditions	<ol style="list-style-type: none"> 1. Supply management has approved the new supply company for addition to the appropriate systems. 2. Systems containing the supplier information are available at the time of the addition request. 3. Requester (and or requesting system) has the proper authorization to make the addition request to add the supplier information. 4. Correct information or data is available for the addition of the new supply company.

Use Case #CRM005 v1r2 (Continued)	Add supplier (sync supplier message in OAG XML)
Postconditions	
Success	The request to add the new supplier data is processed successfully and the required data is confirmed to the originating system or originating person.
Failure	The request failed to process due to the system being unavailable, lack of authorization on the part of the requesting system or person, or the supplier information being insufficient to become a part of the target system(s).

Table 7: Add supplier use case.

Use case description

Main scenario

1. Internal requisition staff, both local and regional, have received Supply Management's approval for addition of a new supply company (one that is not in the customer databases maintained by the enterprise).
2. The appropriate access system (internal system terminal or web site access) is entered to obtain the required information (This step is the sign on authentication for the front-end access required for the accessing system for internal personnel of the enterprise. It is part of the sequenced flow, but not a part of this use case as typically this transaction is accomplished early in the day for multiple reasons. Access may be by regional personnel at the enterprise intranet).
3. The required entry data is entered into the front-end system to add the required and or optional information for the new supply company (See Inputs Summary for request data).
4. Entry is made into each of enterprise systems for the new supplier(s) (Currently, two such systems exist).
5. The supplier is confirmed by each of the two existing systems within the manufacturing enterprise (See Business Rules). If this confirmation fails, the supplier data in one of the systems may have to be re-added in order to maintain the supplier system data integrity.

6. The supplier data is either successfully added to the target system or fails to be added. If a failure occurs, appropriate action to remedy the situation causing the failure is taken. If a successful return is received, subsequent transactions may be pursued to place orders with the new supply company.

Business rules

The manufacturing enterprise operates within the boundaries of the following rules:

1. Suppliers are added to the two existing supplier systems.
2. The supplier data must be maintained as identical within the supplier type on both systems.
3. The two systems are Supplier Management System and External System.

Traceability

CRM001 Get Supplier.

Inputs summary

The input data is primarily represented by the added information that is required to add the supplier data record (This data is located in the Open Application Group Sync Supplier XML messages).

The data representing suppliers is held as partner data and is characterized by partner type (Data definitions are contained in the Sync_Supplier_DED Excel spreadsheet). The data is:

Partner Data (this data is all that is required for the request on the Get Supplier message)

Name 1

Partner ID*

Partner Type

One time: indicates the information is established only for a particular transaction

Synchronization Indicator: indicates the type of transaction that is being performed, i.e. "A" for add, "C" for change, "D" for delete, and "R" for replace

Additional Partner Data

Active Status Indicator

Currency

Description

- Dun and Bradstreet Identifier
- General Ledger entity source code
- Additional Names up to nine occurrences
- Business Partner Parent Identifier
- Cross Referenced Business Partner Identifier
- Business Partner Rating
 - Business Partner Role
 - Payment Method
 - Tax Exemption Status
 - Tax Identifier
 - Term Identifier
 - User Area
- Address Data
 - Address :Lines 1 through 9
 - Address Type
 - City
 - Country
 - County
 - Description
 - Fax Telephone Numbers 1 through 9
 - Postal Code
 - Region
 - State or Province
 - Tax Jurisdiction
 - Telephone Numbers 1 through 9
 - Uniform Resource Locator (URL)
 - User Area
- Contact Data
 - Name 1
 - Contact Type
 - Description
 - Email address
 - Fax telephone numbers 1 through 9
 - Names 1 through 9

- Telephone numbers 1 through 9
- User Area
- Attached Reference Data
 - File name
 - Universal Resource Identifier (URI)
- Additional Reference Data
 - Compression Type
 - Compression File Identifier
 - Creation data and time – see Date and Time in Input Summary
 - File Type
 - Notes 1 through 9
 - Quantity or File Size
 - Qualifier
 - Value
 - Number of Decimals
 - Sign
 - Unit of Measure
 - User Area
- Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)
 - Logical ID
 - Component*
 - Task
 - Reference ID
 - Confirmation
 - Language
 - Code page
 - Authorization Identifier
- Date and Time
 - Qualifier*
 - Year
 - Month
 - Day

Hour
Minute
Second
Subsecond*
Time zone*

* Represents data elements not mapped to the IDM.

Output summary

The output data represents the response data that is returned from the target system. It is contained in the Confirm BOD XML message. The data is:

Confirm Message

Control Area consisting of message verb and noun along with the revision number of the message

Status level

Optional Confirm Data

Description

Original Reference Identifier

User Area

Optional Confirm Message Data

Description

Reason Code

User Area

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID

Component

Task

Reference ID

Confirmation

Language

Code page

Authorization Identifier

Date and Time

Qualifier*

Year
Month
Day
Hour
Minute
Second
Subsecond*
Time zone*

* Represents data elements not mapped to the IDM.

Use case notes

The Sync Supplier XML messages has a variety of uses with the concept of being a “push” transaction that will maintain data integrity across systems. The same data is present in all of its uses that are add, change, replace and delete. This use case may be thus extended to cover the other functions provided by the Sync Supplier message of change, replace, and delete through the use of the synchronization indicator to alter the message’ purpose

Sync (update) catalog

Use Case # SSD001 v1r4

Sync (update) catalog

Subject area	Retail Sales and Manufacturing – Supply Side Transactions.
Business event	The catalog management department for a retail sales and manufacturing enterprise desires to update their current catalog. To accomplish this task, item specifications and prices must be added to complete the new catalog that will be published to suppliers through the enterprise' purchasing arm.
Actor(s)	
Primary	Catalog Management.
Secondary	Order Management, Product Management, Purchasing, Supplier System.
Use case overview	The catalog management department of a large, retail sales and manufacturing firm has become aware of additional items available for purchase from their organization. The catalog produced by the firm has to be updated. Catalog management must obtain item, item price, and specifications for items prior to updating the catalog. Once this information is gathered, the catalog management department will update the catalog for their records and for the purchasers of their products.
Preconditions	<ol style="list-style-type: none">1. Systems containing the required information, whether for the catalog, order or product management, and purchasing, are available at the time of any request.2. Requester (and or requesting system) has the proper authorization to make the request of the involved system.3. Correct information is available for the any system involved with the catalog update.

**Use Case # SSD001 v1r4 Sync (update) catalog
(Continued)**

Postconditions

Success	The process of updating the catalog is achieved successfully. To achieve this state, the various systems involved have all supplied any required information and added any required information.
Failure	The process of updating the catalog may fail due to the unavailability of a system, lack of the correct information required to request data, or the lack of authority to process any of the varying requests and or additions of data. The process may fail at any point and be resolved for that point and fail later in the process. The ultimate failure to update the catalog means that some point of failure could not be resolved.

Table 8: Sync (update) catalog use case.

Use case description

Main scenario

1. The catalog management department, as is routinely accomplished, has received a general notification of new item(s) that are now available for sale from the enterprise. This general notification can be by memo, email, or bulletin. It will contain the item, an item description, the item identification, feature identifications, and the price list identification. This step is not a portion of the catalog update use case but serves here to indicate what starts the process of the update and sets the context for the use case. The remainder of the main scenario constitutes the use case.
2. Upon receipt of this notification, the Catalog management department personnel generate a request for the current catalog (only one catalog is issued for the enterprise) from order management for review (This area of catalog management is charged with maintaining a current catalog to be used by their customers).
3. After confirming that the new item(s) is not contained within the current catalog (in other words not just an update of an already existing item), catalog management personnel generates a request for detailed item information

from the product management department (Product management is the source of the original notification and utilizes the Product Management system).

4. Completing their review of this detailed item, basic information, catalog management personnel then generates a request for the specifications for the item from product management.
5. Catalog management personnel also generates a request for the price list information from order management where the pricing on newly established items is handled.
6. When the information is obtained for the item, its specifications, and price, the information is then entered in the required format for the new or updated catalog on the private catalog management system.
7. The information is verified as correct for the catalog.
8. When the next periodic update of the catalog is scheduled or immediately following verification of correct information, the catalog management department copy of the catalog is updated throughout the enterprise. This updated catalog is sent as an update to the catalogs found in the order management system and to the various supplier systems for the suppliers that are purchasing from the enterprise.

Business rules

Within the manufacturing and retail sales enterprise, the following departments have these functions assigned, among others:

1. Order management: pricing of the various items offered by the enterprise
2. Product data management: development or acquisition of new items and updates of current items along with maintenance of the item specification information
3. Catalog management: maintenance of a current catalog for use by the enterprise customers with both periodic releases of an updated catalog, annual release of a new catalog, and emergency release of any updates as required.

Inputs summary

The input summary will offer the data that is utilized by a number of OAG XML messages that process the use case. An attempt will be made to clarify the data that originates with which message and to maintain, as much as possible, the order of the messages for the accomplishment of the use case.

The messages utilized are:

1. Get Catalog (GC)
2. Get Item (GI)
3. Get Item Specs (GIS)
4. Get Price List (GP)
5. Sync Catalog (Update) (SC)

Where the initials are used signifies that the data is only in that message and not any other message previously specified.

This input data is found in the Get Catalog and Sync Catalog messages:

- Catalog Name
- Synchronization Indicator (SC)
- Catalog Revision
- Classification Scheme Identification
- Date
 - Qualifier - Effective and Expiration
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Sub Second
 - Time Zone
- Description
- User Area
- Partner
 - Currency
 - Description
 - Name one through nine
 - One time indicator
 - Partner ID*
 - Partner type
 - Tax Exempt
 - Tax ID
 - User Area

Catalog Item Category

Item category ID

Description

User Area

Attached Reference Data

File name

Universal Resource Identifier (URI)

Compression ID

Compression Type

Date time

Qualifier* - Creation

Year

Month

Day

Hour

Minute

Second

Sub Second*

Time Zone*

Description

File Type

Notes

Quantity - file size

Title

User Area

Category Items - one set for each item that is in the catalog

Item

Description

User Area

Features and value of items in catalog

Feature ID

Item feature value

Description

Item (Supplier) Product Revision

Name one through nine

Partner ID

Unit of measure

User Area

The input data found in the Get Item message:

Item

Item Header Data

Bill of Material Identification Code

Bill of Material Revision

Commodity one through three

Buyer Contract Identifier

Supplier Contract Identifier

Catch weight flag

Date time

Qualifier* - Creation

Year

Month

Day

Hour

Minute

Second

Sub Second*

Time Zone*

Description

Disposition Routing

Drawing Identifier

Expiration Control Flag

Freight Class

Freight Item Number

General Ledger Entity Source Code

General Ledger Nominal Account Code

Hazardous Material Code

Item class

Item definition

Item revision
 Item description
 Item status
 Item type
 Supplier Item Identifier
 Lotlevel1 through Lotlevel2
 Lot or serial number flag
 Notes one through 9
 Ownership code
 Packing
 Packing Description
 Partner ID*
 Product line
 Property 1 through property 99
 Quantity
 Qualifier - Average Run Size (AVGRUNSIZE), Height Dimension (HEIGHT), Length Dimension (LENGTH), Lot size maximum quantity (LOTSIZEMAX), Lot size minimum quantity (LOTSIZEMIN), Lot size multiple quantity (LOTSIZEMLT), Shelf life (SHELFLIFE), Volume (VOLUME), Weight (WEIGHT), and Width dimension (WIDTH)
 Value
 Number of Decimals
 Sign
 Unit of Measure
 Shipping Material Identifier
 Shipping Material Description
 Unit Type
 Unit of Measure
 Unit of measure group identifier
 Universal product code
 Universal product code shipping container code
 Warranty
 User Area
 Alternate Unit of Measure

Description
 Notes one through 99
 Packing
 Packing description
 Quantity
 Qualifier - Height Dimension (HEIGHT), Length Dimension (LENGTH), Multiplier (MULTIPLIER), Volume (VOLUME), Weight (WEIGHT), and Width dimension (WIDTH)
 Value
 Number of Decimals
 Sign
 Unit of Measure
 Universal Product code
 Universal product code shipping container code
 User Area
 Location Data
 Bill of Material Identification Code
 Bill of Material Revision
 Drawing Identifier
 Hazardous Material Code
 Item
 Lotlevel1 through lotlevel2
 Notes 1 through 99
 Packing
 Property1 through property99
 Quantity
 Qualifier - Lot size maximum quantity (LOTSIZEMAX), Lot size minimum quantity (LOTSIZEMIN), Lot size multiple quantity (LOTSIZEMLT)
 Value
 Number of Decimals
 Sign
 Serial Number
 Site level 1 through site level 9
 Unit of measure

- Universal product code
- User Area
- Item value
 - Date time
 - Qualifier* - Effective and Expiration
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Sub Second*
 - Time Zone*
 - Cost type
 - Description
 - General ledger entity source
 - General ledger nominal account
 - Notes 1 through 99
 - Operation amount
 - Qualifier - Unit
 - Type - both transactional and functional
 - Value
 - Number of Decimals
 - Sign
 - Currency
 - Unit of measure factor
 - Unit of measure factor number of decimals
 - Unit of measure
 - Value Class
 - User Area
- Attached Reference
 - File name
 - Universal Resource Identifier (URI)
 - Compression ID

Compression Type

The following input data is contained in the Get ItemSpecs message:

- Feature Identification

- Description

- Feature Data Type

- Mandatory Flag

- Quantity:

 - Qualifier - Lower Limit (LOWERLIMIT) and Upper Limit (UPPERLIMIT)

 - Value

 - Number of Decimals

 - Sign

- User Area

- Feature Values

 - Description

 - Feature Value

 - Unit of Measure

 - User Area

- Feature Value Assignment

 - Default Value

 - Description

 - Item

 - Item Category Identification

 - Item Revision

 - Item Feature Value

 - Lot level 1 and lot level 2

 - Partner Identification

 - User Area

The following input data is contained in the Get PriceList message:

- Price List Identification

- Currency

- Date time

 - Qualifier* - Effective and Expiration

 - Year

- Month
- Day
- Hour
- Minute
- Second
- Sub Second*
- Time Zone*
- Description
- Division
- General Ledger Entity Destination Code
- Partner Identification*
- Price list revision
- User Area
- Price list line items
 - Description
 - Item
 - Item Category Identification
 - Line Number
 - Operation Amount
 - Qualifier - Unit
 - Type - transactional
 - Value
 - Number of Decimals
 - Sign
 - Currency
 - Unit of measure factor
 - Unit of measure factor number of decimals
 - Unit of measure
 - User Area
- Line Price Breaks and Modifiers
 - Amount
 - Qualifier - Discount Value Percent (DSCPRCNT), Discount Value Amount (DSCVALUE), Override amount (OVERRIDE), Price Break Amount (PRCBRK)

- Type
- Value
- Number of Decimals
- Sign
- Currency
- Debit or credit
- Description
- Override Price
- Quantity
 - Qualifier - Price Break (PRCBRK)
 - Value
 - Number of Decimals
 - Sign
- User Area
- Price List Qualifiers
 - Amount
 - Qualifier - Discount Value Percent (DSCPRCNT), Discount Value Amount (DSCVALUE), Price Break Amount (PRCBRK)
 - Type
 - Value
 - Number of Decimals
 - Sign
 - Currency
 - Debit or credit
 - Description
 - User Area

Standard information in all of the messages is:

Sender Information - data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

- Logical ID
- Component*
- Task

Reference ID
Confirmation
Language
Code page
Authorization Identifier
Date and Time
 Qualifier*
 Year
 Month
 Day
 Hour
 Minute
 Second
 Subsecond*
 Time zone*

* Represents data elements not mapped to the IDM.

This use case anticipates the messages for input to be utilized in the following order:

1. Get Catalog
2. Get Item
3. Get ItemSpecs
4. Get PriceList
5. Sync Catalog

Output summary

The output data summary will offer the data that is utilized by a number of OAG XML messages that provide responses in the use case. An attempt will be made to clarify the data that originates with which message and to maintain, as much as possible, the order of the messages for the accomplishment of the use case. The messages utilized are:

1. Show Catalog (SC)
2. Show Item (SI)
3. Show ItemSpecs (SIS)
4. Show PriceList (SP)
5. Confirm BOD

Where the initials are used signifies that the data is only in that message and not any other message previously specified.

The data contained in the Show Catalog message is:

- Catalog Name
- Catalog Revision
- Classification Scheme Identification
- Date
 - Qualifier - Effective and Expiration
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Sub Second
 - Time Zone
- Description
- User Area
- Partner
 - Currency
 - Description
 - Name one through nine
 - One time indicator
 - Partner ID*
 - Partner type
 - Tax Exempt
 - Tax ID
 - User Area
- Catalog Item Category
 - Item category ID
 - Description
 - User Area
- Attached Reference Data
 - File name

- Universal Resource Identifier (URI)
- Compression ID
- Compression Type
 - Date time
 - Qualifier* - Creation
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Sub Second*
 - Time Zone*
- Description
- File Type
- Notes
- Quantity - file size
- Title
- User Area
- Category Items - one set for each item that is in the catalog
 - Item
 - Description
 - User Area
- Features and value of items in catalog
 - Feature ID
 - Item feature value
 - Description
 - Item (Supplier) Product Revision
 - Name one through nine
 - Partner ID
 - Unit of measure
 - User Area

The data contained in the Show Item message is:

Item

Item Header Data

Bill of Material Identification Code

Bill of Material Revision

Commodity one through three

Buyer Contract Identifier

Supplier Contract Identifier

Catch weight flag

Date time

Qualifier* - Creation

Year

Month

Day

Hour

Minute

Second

Sub Second*

Time Zone*

Description

Disposition Routing

Drawing Identifier

Expiration Control Flag

Freight Class

Freight Item Number

General Ledger Entity Source Code

General Ledger Nominal Account Code

Hazardous Material Code

Item class

Item definition

Item revision

Item description

Item status

Item type

Supplier Item Identifier
 Lotlevel1 through Lotlevel2
 Lot or serial number flag
 Notes one through 9
 Ownership code
 Packing
 Packing Description
 Partner ID
 Product line
 Property 1 through property 99
 Quantity
 Qualifier - Average Run Size (AVGRUNSIZE), Height Dimension (HEIGHT), Length Dimension (LENGTH), Lot size maximum quantity (LOTSIZEMAX), Lot size minimum quantity (LOTSIZEMIN), Lot size multiple quantity (LOTSIZEMLT), Shelf life (SHELFLIFE), Volume (VOLUME), Weight (WEIGHT), and Width dimension (WIDTH)
 Value
 Number of Decimals
 Sign
 Unit of Measure
 Shipping Material Identifier
 Shipping Material Description
 Unit Type
 Unit of Measure
 Unit of measure group identifier
 Universal product code
 Universal product code shipping container code
 Warranty
 User Area
 Alternate Unit of Measure
 Description
 Notes one through 99
 Packing
 Packing description

Quantity

Qualifier - Height Dimension (HEIGHT), Length Dimension (LENGTH), Multiplier (MULTIPLIER), Volume (VOLUME), Weight (WEIGHT), and Width dimension (WIDTH)

Value

Number of Decimals

Sign

Unit of Measure

Universal Product code

Universal product code shipping container code

User Area

Location Data

Bill of Material Identification Code

Bill of Material Revision

Drawing Identifier

Hazardous Material Code

Item

Lotlevel1 through lotlevel2

Notes 1 through 99

Packing

Property1 through property99

Quantity

Qualifier - Lot size maximum quantity (LOTSIZEMAX), Lot size minimum quantity (LOTSIZEMIN), Lot size multiple quantity (LOTSIZEMLT)

Value

Number of Decimals

Sign

Serial Number

Site level 1 through site level 9

Unit of measure

Universal product code

User Area

Item value

Date time

- Qualifier *- Effective and Expiration
 - Year
 - Month
 - Day
 - Hour
 - Minute
 - Second
 - Sub Second*
 - Time Zone*
- Cost type
- Description
- General ledger entity source
- General ledger nominal account
- Notes 1 through 99
- Operation amount
 - Qualifier - Unit
 - Type - both transactional and functional
 - Value
 - Number of Decimals
 - Sign
 - Currency
 - Unit of measure factor
 - Unit of measure factor number of decimals
 - Unit of measure
- Value Class
- User Area
- Attached Reference
 - File name
 - Universal Resource Identifier (URI)
 - Compression ID
 - Compression Type

The data contained in the Show ItemSpecs message is:

- Feature Identification

- Description

- Feature Data Type

- Mandatory Flag

- Quantity:

 - Qualifier - Lower Limit (LOWERLIMIT) and Upper Limit (UPPERLIMIT)

 - Value

 - Number of Decimals

 - Sign

- User Area

- Feature Values

 - Description

 - Feature Value

 - Unit of Measure

 - User Area

 - Feature Value Assignment

 - Default Value

 - Description

 - Item

 - Item Category Identification

 - Item Revision

 - Item Feature Value

 - Lot level 1 and lot level 2

 - Partner Identification

 - User Area

The data contained in the Show PriceList message is:

- Price List Identification

- Currency

- Date time

 - Qualifier *- Effective and Expiration

 - Year

 - Month

- Day
- Hour
- Minute
- Second
- Sub Second*
- Time Zone*
- Description
- Division
- General Ledger Entity Destination Code
- Partner Identification
- Price list revision
- User Area
- Price list line items
 - Description
 - Item
 - Item Category Identification
 - Line Number
 - Operation Amount
 - Qualifier - Unit
 - Type - transactional
 - Value
 - Number of Decimals
 - Sign
 - Currency
 - Unit of measure factor
 - Unit of measure factor number of decimals
 - Unit of measure
 - User Area
- Line Price Breaks and Modifiers
 - Amount
 - Qualifier - Discount Value Percent (DSCPRCNT), Discount Value Amount (DSCVALUE), Override amount (OVERRIDE), Price Break Amount (PRCBRK)
 - Type

- Value
- Number of Decimals
- Sign
- Currency
- Debit or credit
- Description
- Override Price
- Quantity
 - Qualifier - Price Break (PRCBRK)
 - Value
 - Number of Decimals
 - Sign
- User Area
- Price List Qualifiers
 - Amount
 - Qualifier - Discount Value Percent (DSCPRCNT), Discount Value Amount (DSCVALUE), Price Break Amount (PRCBRK)
 - Type
 - Value
 - Number of Decimals
 - Sign
 - Currency
 - Debit or credit
 - Description
 - User Area

The data contained in the Confirm BOD message is:

- Confirm Message
 - Control Area consisting of message verb and noun along with the revision number of the message
 - Status level
- Optional Confirm Data
 - Description
 - Original Reference Identifier

User Area
Optional Confirm Message Data

Description
Reason Code
User Area

Sender Information: data coming from the source system that is contained in the XML message (makes up a portion of the Control Area of this portion of the XML message)

Logical ID
Component
Task
Reference ID
Confirmation
Language
Code page
Authorization Identifier

Date and Time

Qualifier*
Year
Month
Day
Hour
Minute
Second
Subsecond*
Time zone*

* Represents data elements not mapped to the IDM.

The use case only anticipates receiving the Confirm BOD for failure conditions except in the use of the Sync Catalog message where the Confirm BOD message will be utilized to indicate success and failure.

Use case notes

This use case utilizes several of the OAG XML messages to accomplish the catalog update. First the old catalog is shown with a Get Catalog and Show Catalog set of messages. Then the additional item information is gathered with Get and Show Item, Get and Show Price Lists, and Get and Show Item Specs messages. Finally, the catalog is pushed out to the suppliers through the purchasing arm of the firm with the actual Sync (Update) Catalog message (the replace indicator would be used in the Sync Catalog message should sufficient items be added or deleted to cause a total replacement of the catalog).

Chapter 3

System Interaction Diagrams

Add sales order

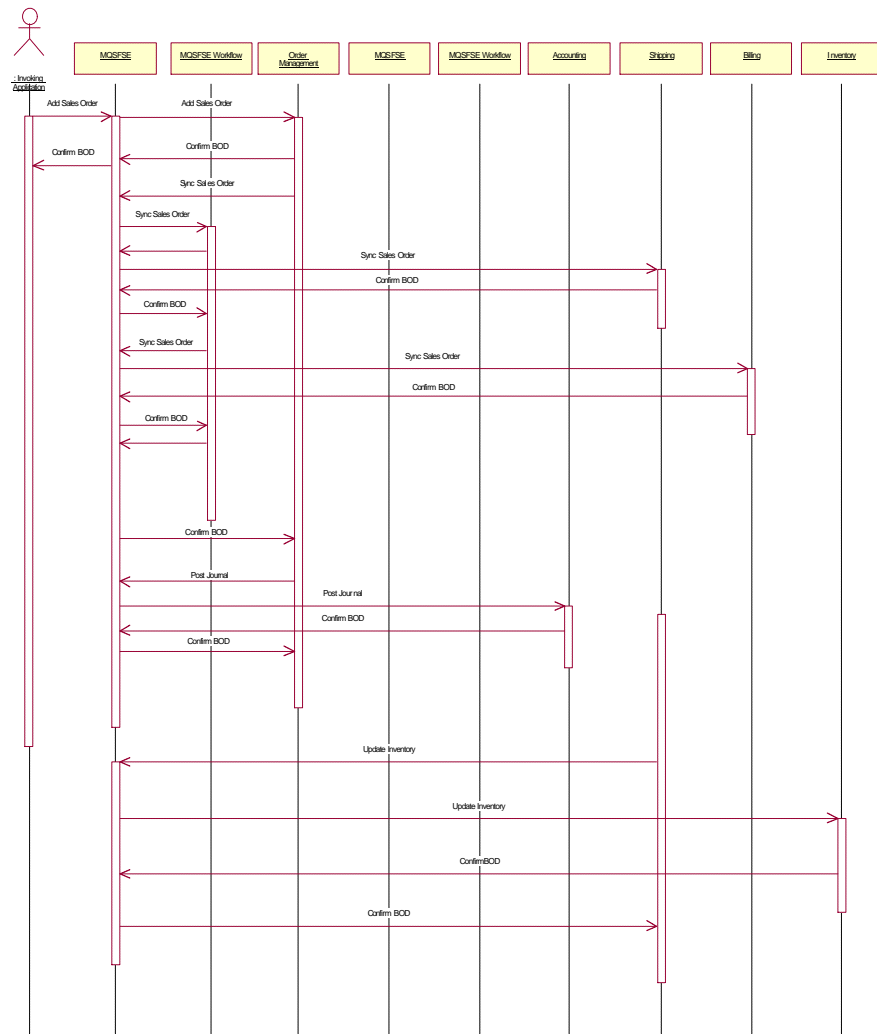


Figure 1: Add sales order system interaction diagram.

Workflow process templates that apply to Figure 1 are as follows:

SyncTwoBackEnds workflow process template.

SetDestinationFromConfirmBOD workflow process template.

SetDestinationWithBODResponse workflow process template.

Change sales order

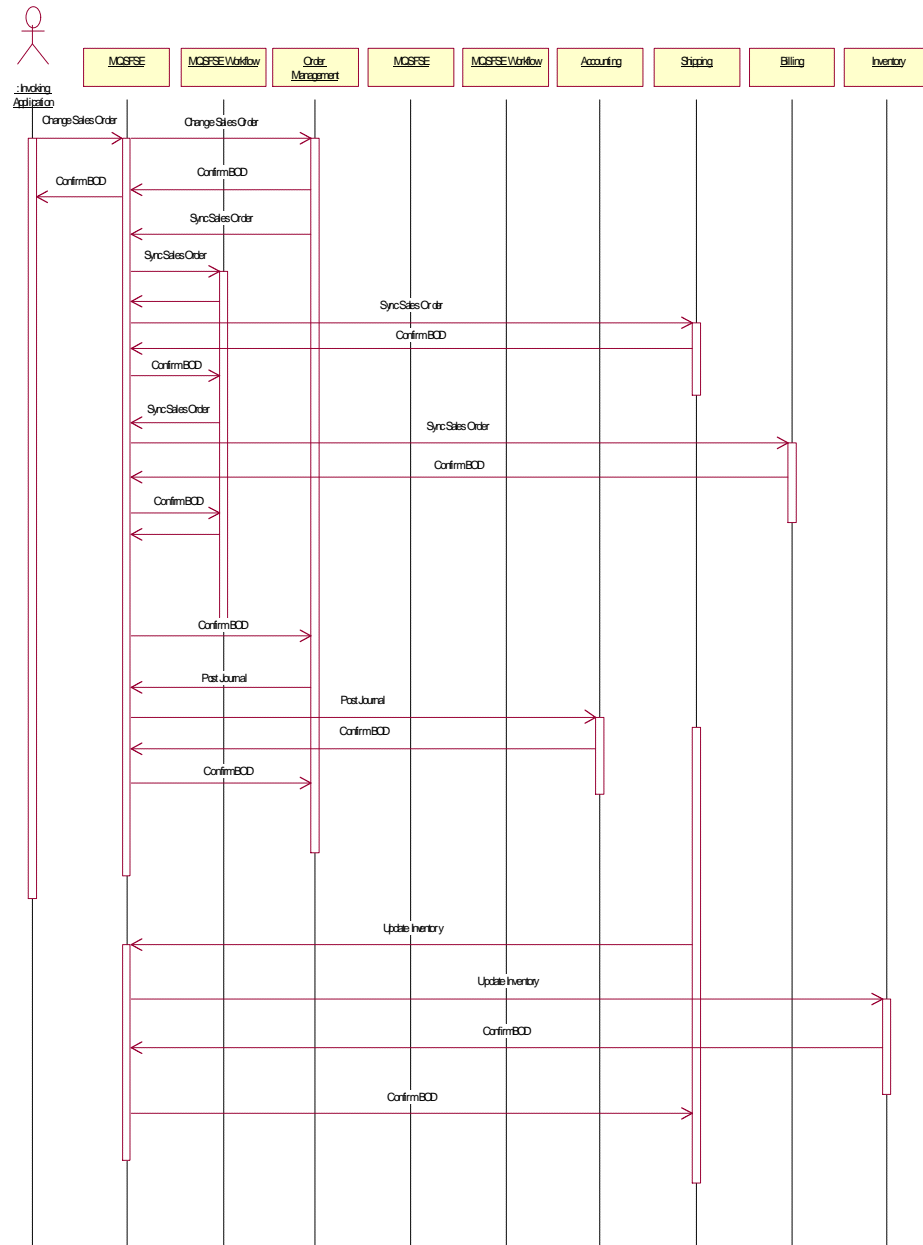


Figure 2: Change sales order system interaction diagram.

Workflow process templates that apply to Figure 2 are as follows:

SyncTwoBackEnds workflow process template.

SetDestinationFromConfirmBOD workflow process template.

Get credit

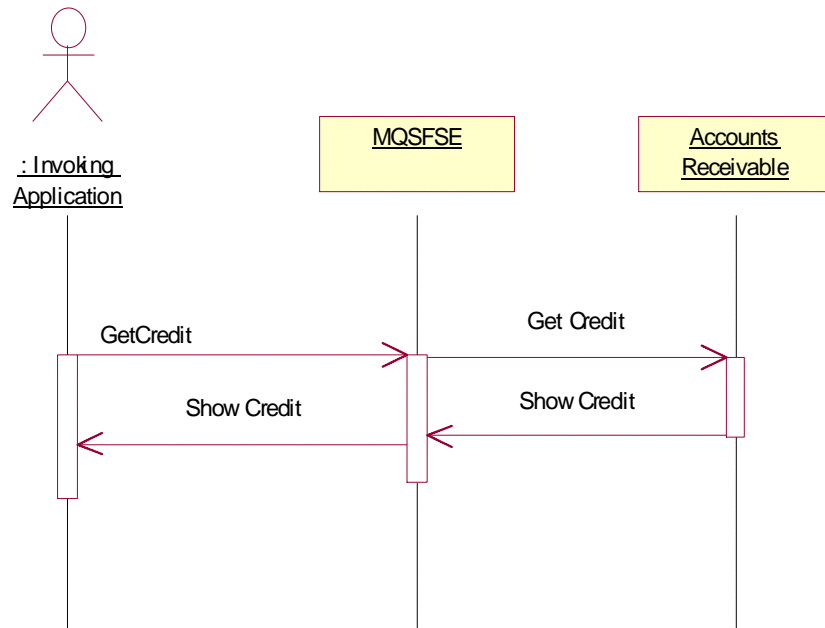


Figure 3: Get credit system interaction diagram.

Workflow process template that applies to Figure 3 is listed below:

SetDestinationFromConfirmBOD workflow process template.

Get customer

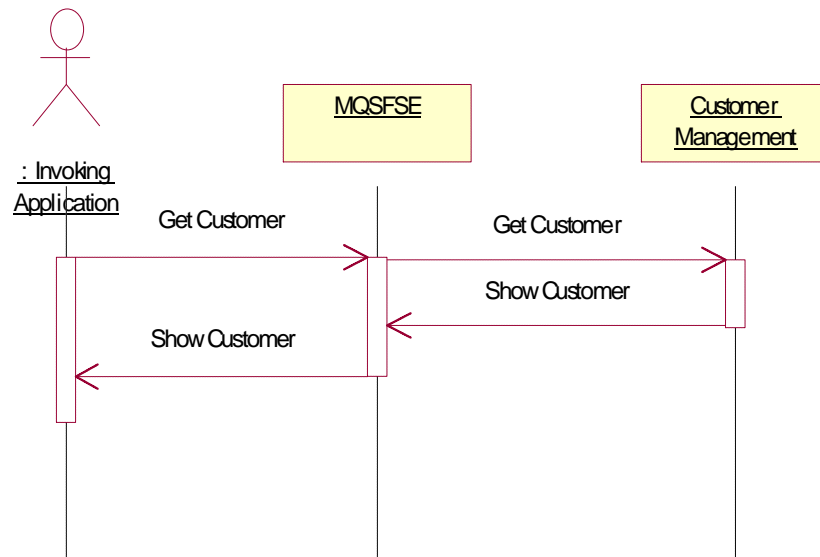


Figure 4: Get customer system interaction diagram.

Workflow process template that applies to Figure 4 is listed below:

SetDestinationFromConfirmBOD workflow process template.

Get supplier

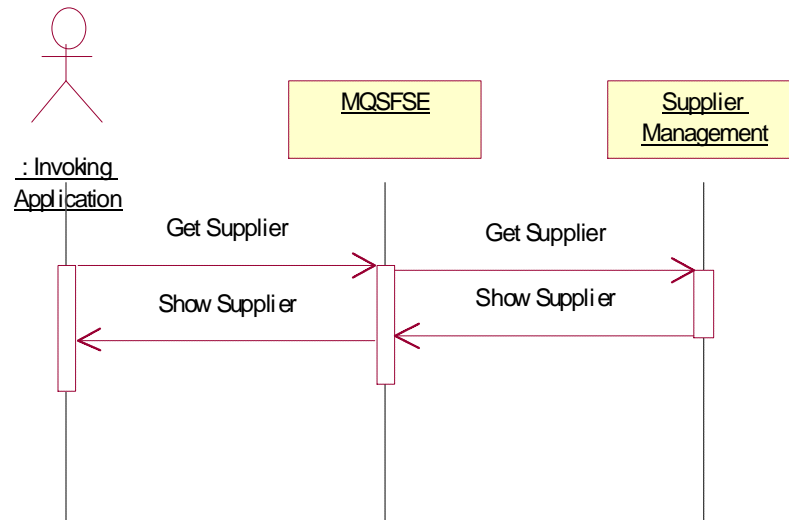


Figure 5: Get supplier system interaction diagram.

Workflow process template that applies to Figure 5 is listed below:

SetDestinationFromConfirmBOD workflow process template.

Sync customer

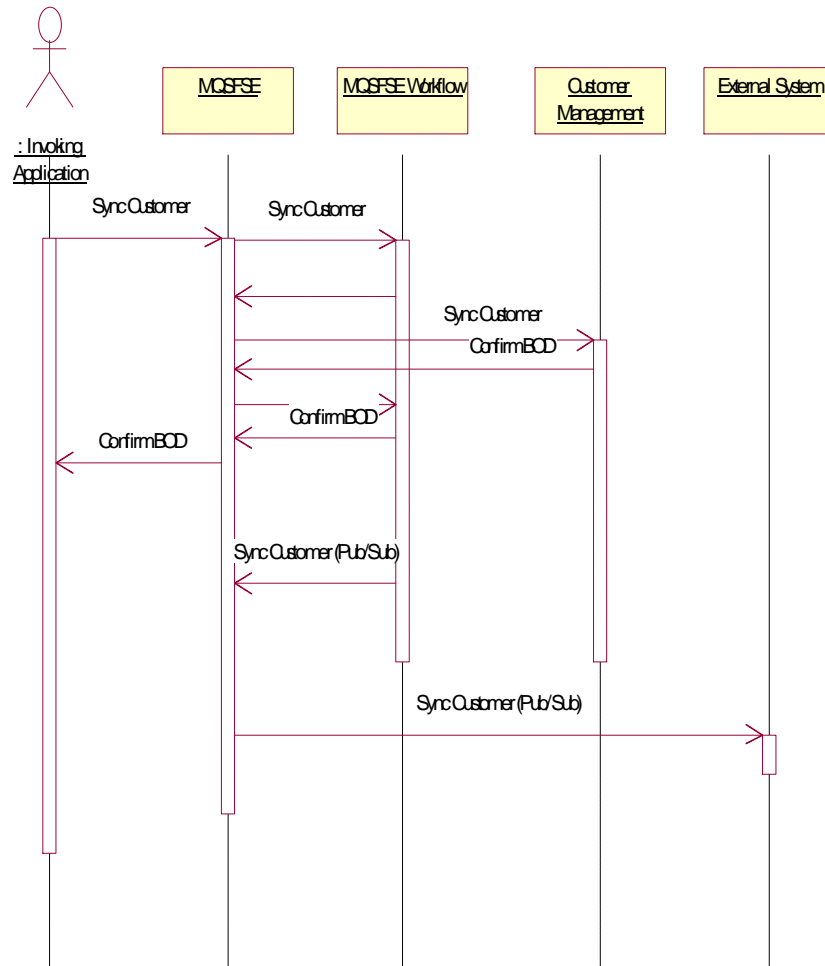


Figure 6: Sync customer system interaction diagram.

Workflow process template that applies to Figure 6 is listed below:

SyncUsingConfirmBODAndPublish workflow process template.

Sync supplier

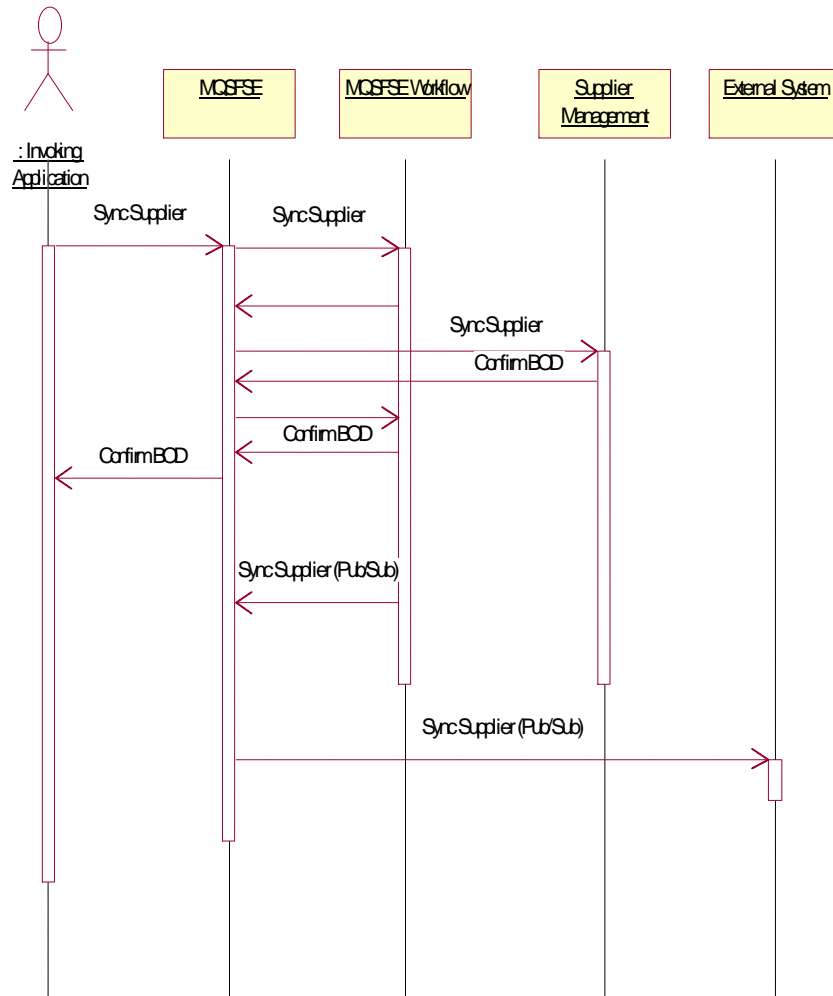


Figure 7: Sync supplier system interaction diagram.

Workflow process template that applies to Figure 7 is listed below:

SyncUsingConfirmBODAndPublish workflow process template.

Sync update catalog

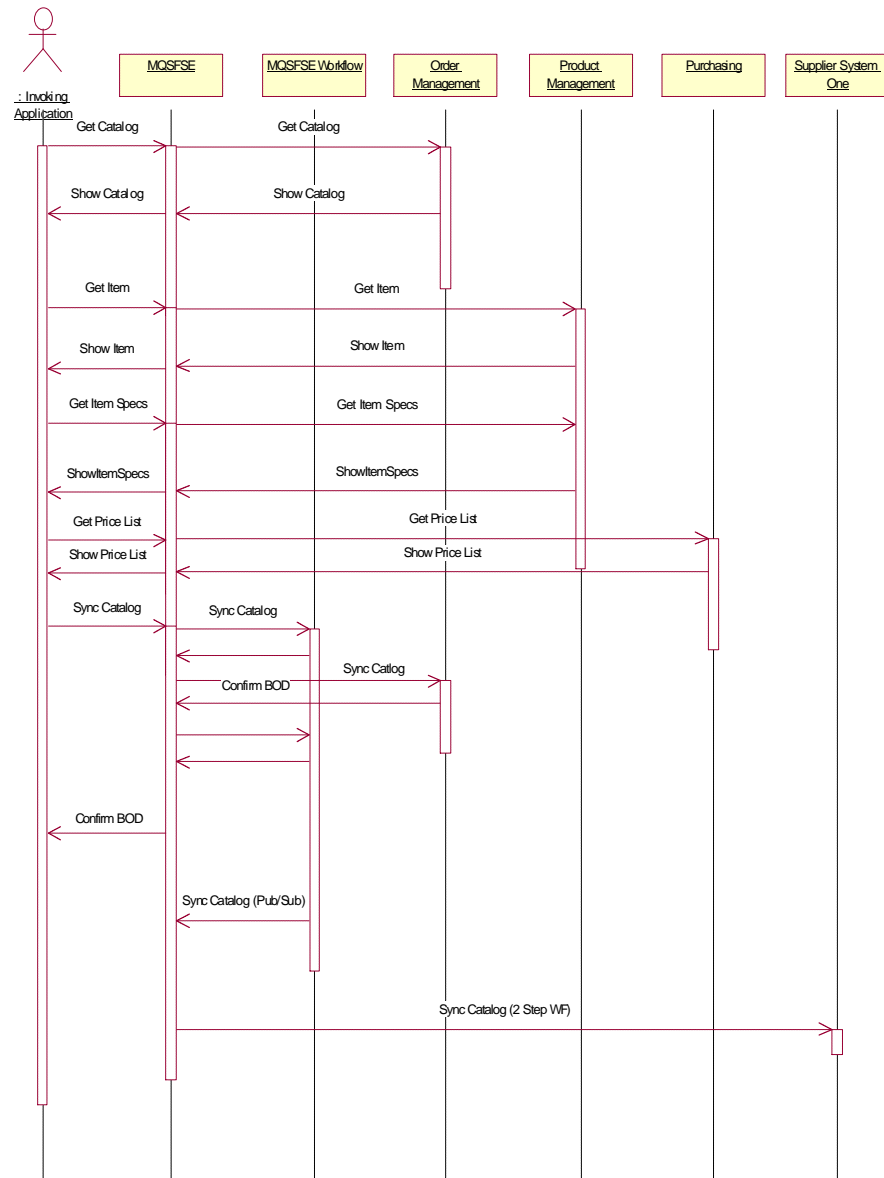


Figure 8: Sync update catalog system interaction diagram.

Workflow process templates that apply to Figure 8 are as follows:

SetDestinationFromConfirmBOD workflow process template.

SyncUsingConfirmBODAndPublish workflow process template.

Chapter 4

Workflow process templates

Add sales order

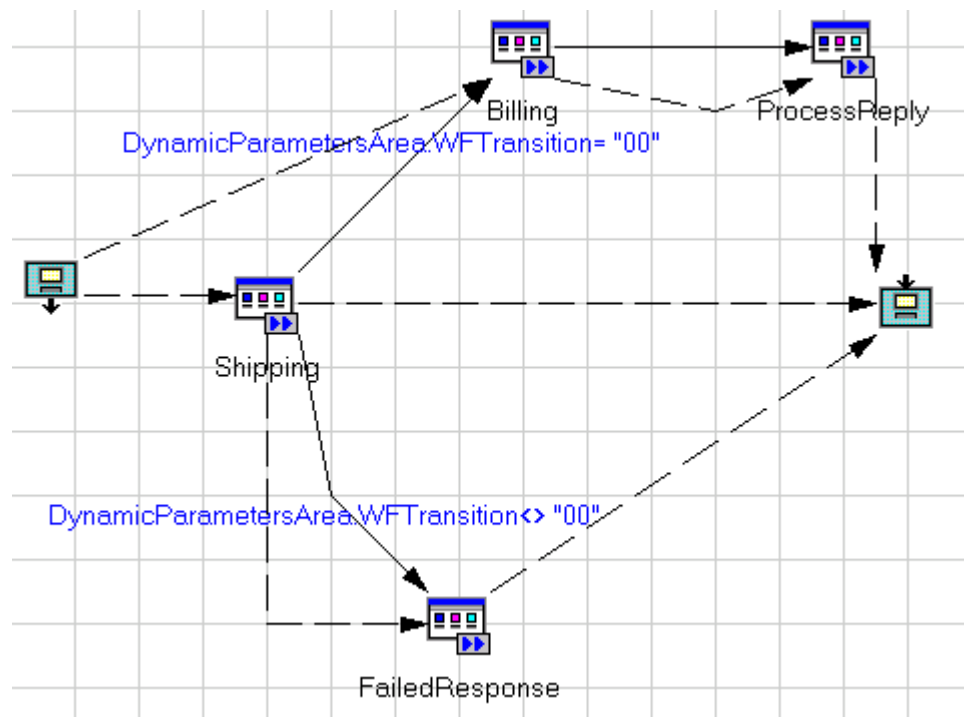


Figure 9: SyncTwoBackEnds workflow process template.

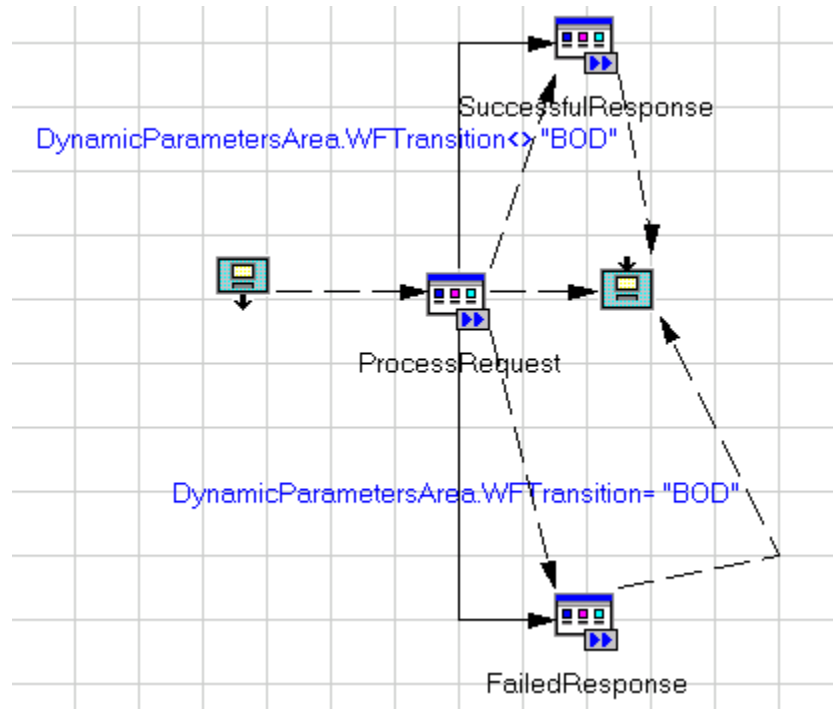


Figure 10: SetDestinationFromConfirmBOD workflow process template.

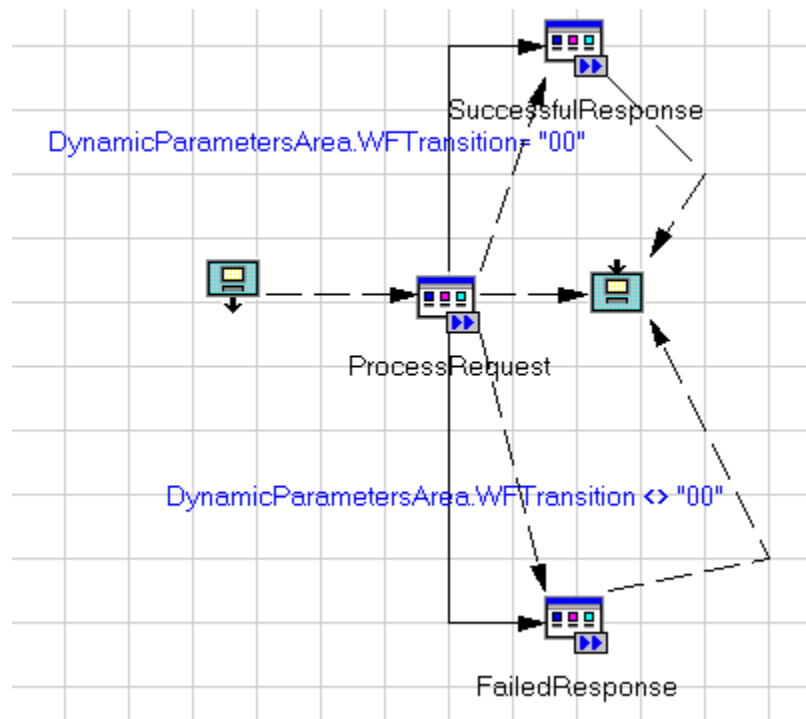


Figure 11: *SetDestinationWithBODResponse* workflow process template.

Change sales order

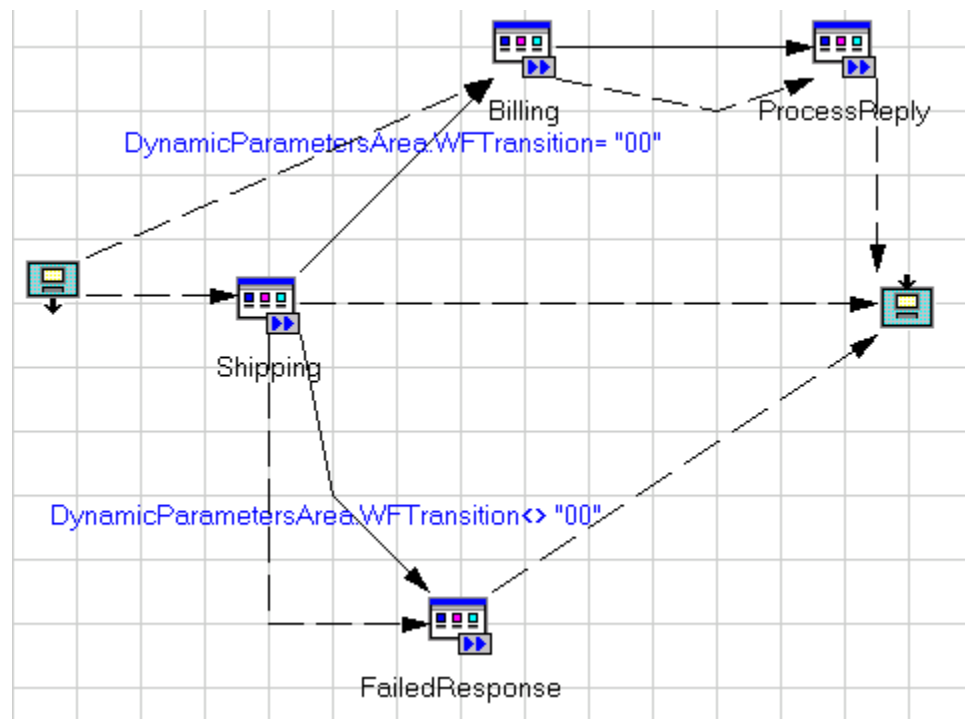


Figure 12: SyncTwoBackEnds workflow process template.

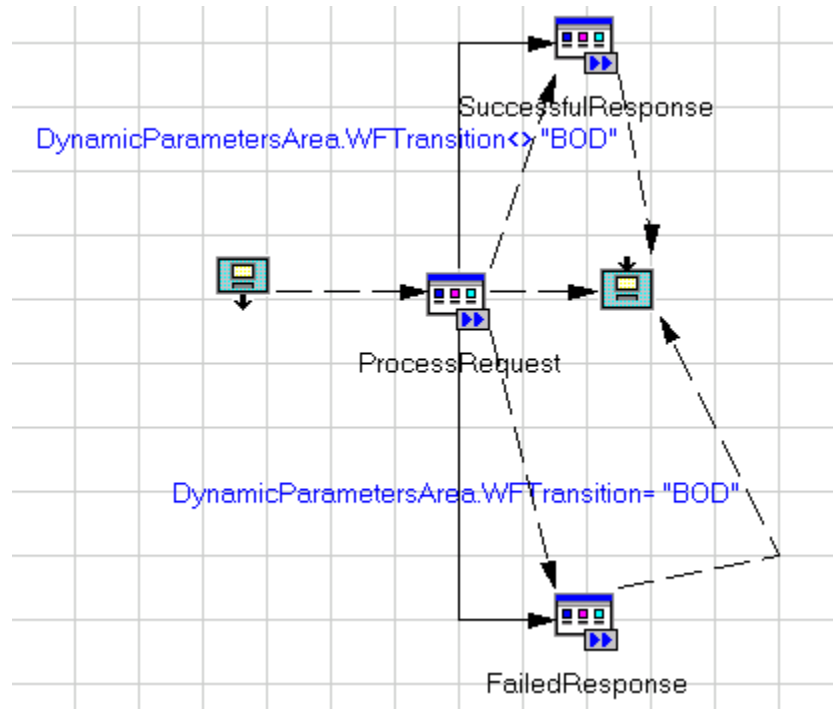


Figure 13: SetDestinationFromConfirmBOD workflow process template.

Get credit

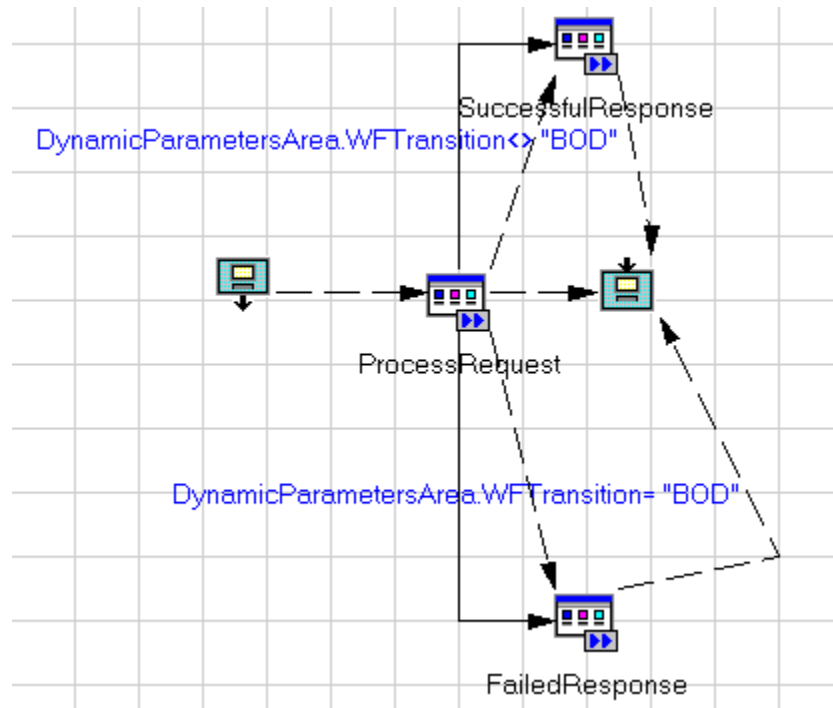


Figure 14: SetDestinationFromConfirmBOD workflow process template.

Get customer

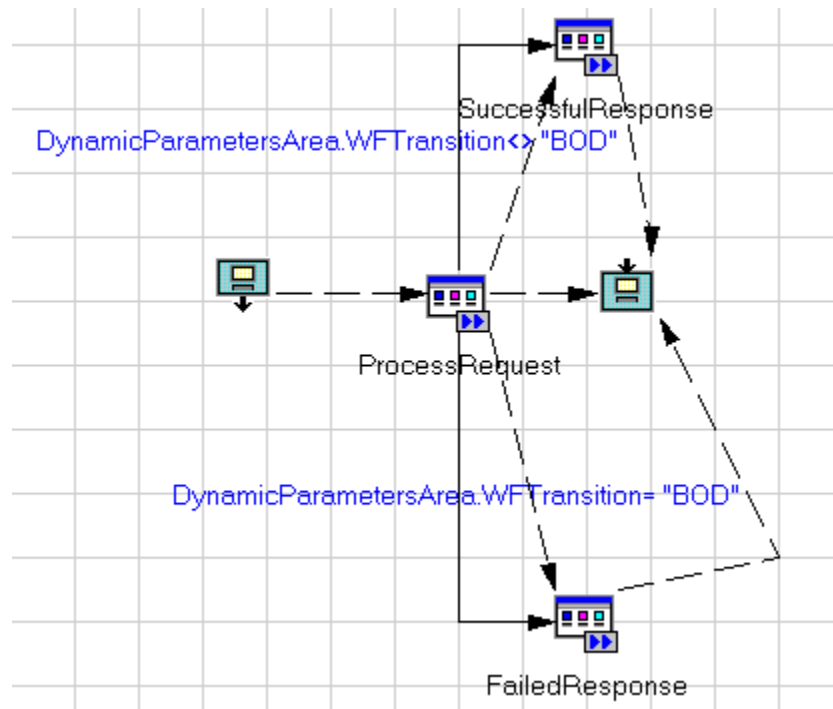


Figure 15: SetDestinationFromConfirmBOD workflow process template.

Get supplier

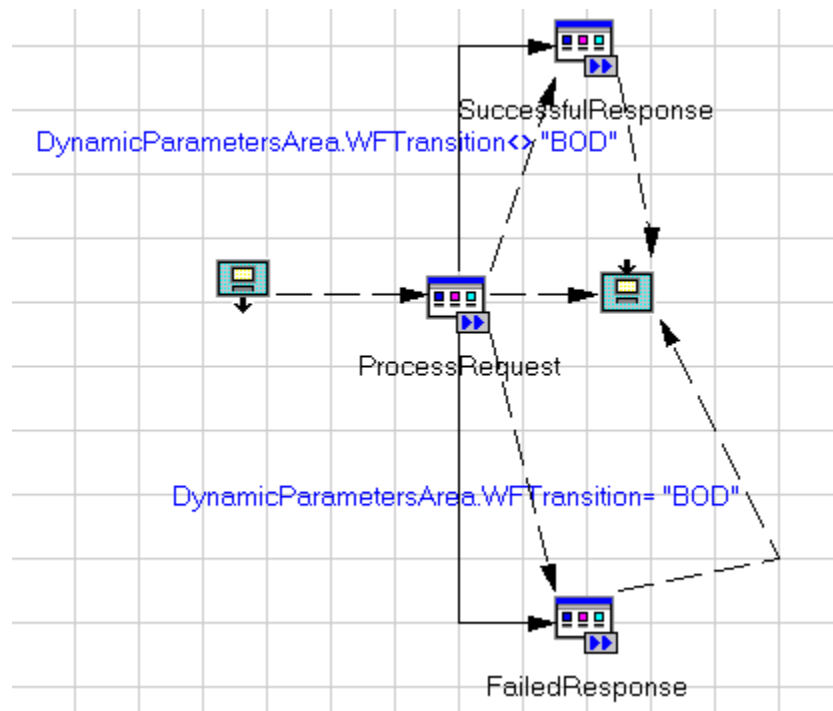


Figure 16: SetDestinationFromConfirmBOD workflow process template.

Sync customer

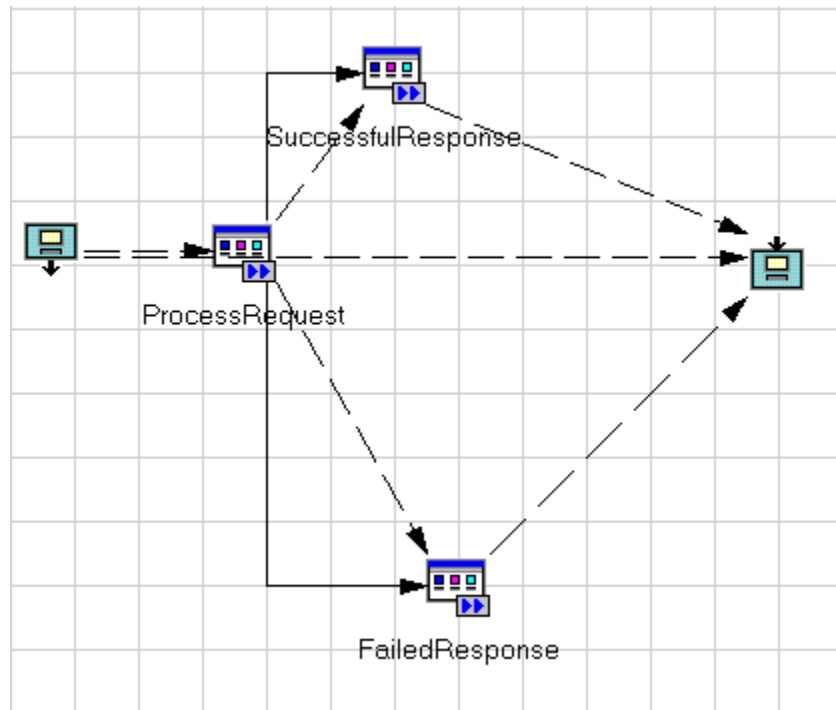


Figure 17: SyncUsingConfirmBODAndPublish workflow process template.

Sync supplier

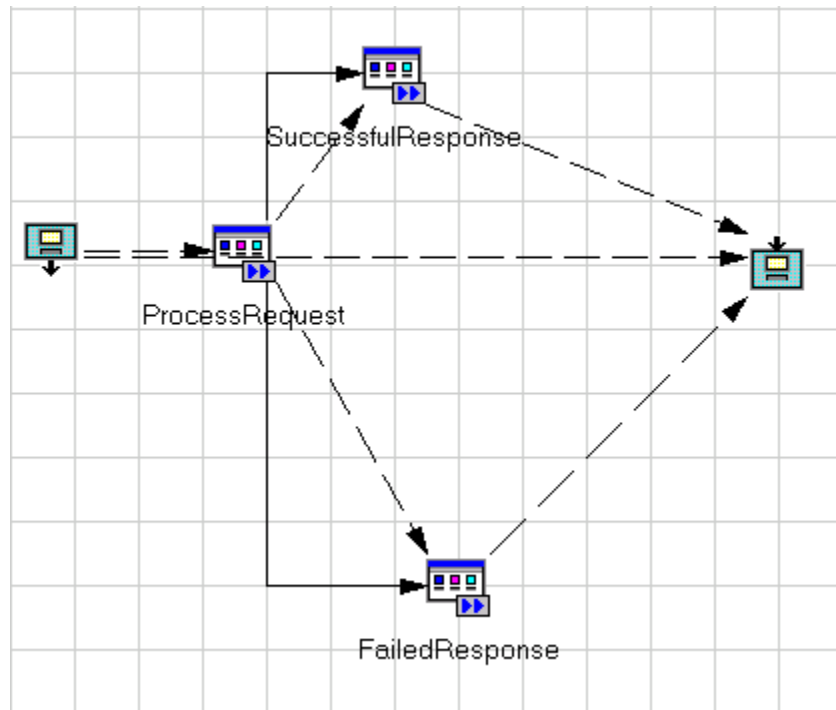


Figure 18: SyncUsingConfirmBODAndPublish workflow process template.

Sync update catalog

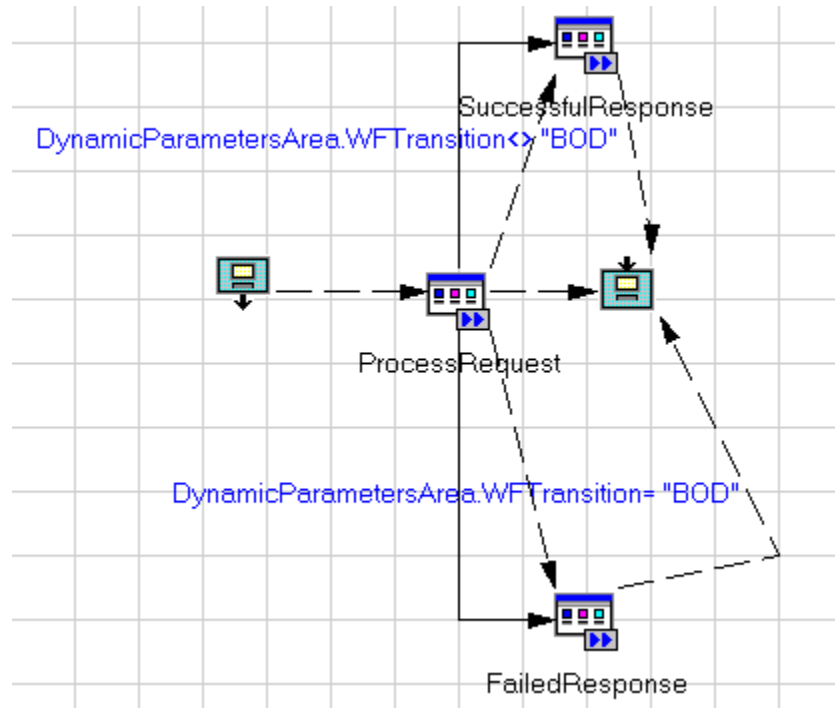


Figure 19: SetDestinationFromConfirmBOD workflow process template.

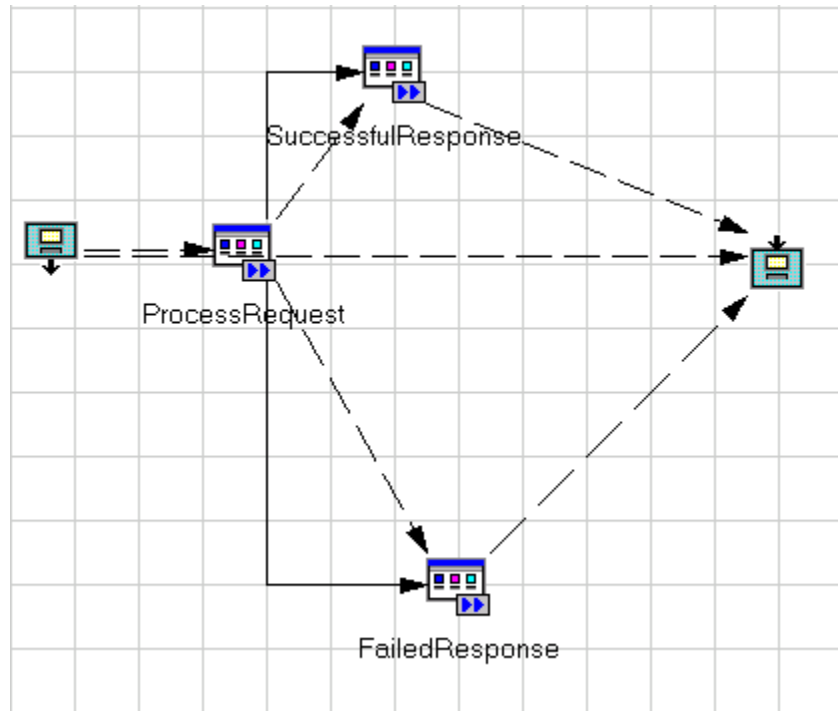


Figure 20: SyncUsingConfirmBODAndPublish workflow process template.

Chapter 5

Open application group

MQSFSE v1.2.2 provides the Open Application Group (OAG) messages wrapped within the MQSFSE header. These messages demonstrate the capability of MQSFSE v1.2.2 to handle a variety of XML languages. This chapter describes the wrapping technique and briefly discusses the OAG techniques for messaging.

In addition, a tooling environment that generates OAG XML messages is also provided. The OAG Interface Design Model (IDM) can be found on the Product CD under the **/OAG** directory. The messages for this IDM are found on the Product CD under the **OAG/Testcases/** directory. The overall design principle of the Open Applications Group's (OAG) approach to XML is focused on simplicity and usability to provide the ability of handling a variety of business situations and areas. Within MQSFSE, OAG is utilized as the messaging medium for the conveyance of data from source, through MQSFSE, to the target. OAG is used as the guiding principle of the MQSFSE product, to allow support for industry neutral XML messages.

Examples of this architecture include the basis for manufacturing, retail, automotive, and telecommunications industry messaging. As with many of the XML messaging architectures, OAG is simple and usable with a knowledge of XML and the Open Applications Group Integration Specification (OAGIS).

More information on OAG can be found at: <http://www.openapplications.org>

Message wrapping

A "wrapping" technique is used to apply the MQSFSE header to the messaging architectures of OAG. The XML message is then built using the Open Applications Group architecture.

OAG messages are primarily industry neutral providing a messaging standard for inter-application communications for manufacturing, supplier, customer, and invoices.

Below in Figure 20 is a graphical representation of the MQSFSE "wrapping" method when using the MQSFSE header with an OAG messaging architecture.

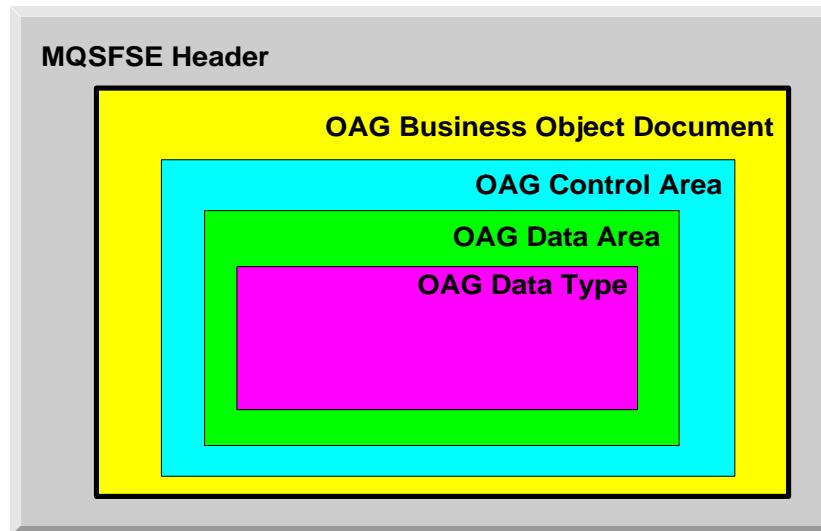


Figure 21: MQSFSE message structure for OAG.

Business object document

The business object document (BOD) is used to communicate messages between applications. It contains information from the Control area as well as the Transaction Data area to allow the destination application to accomplish the action. This is also known as the Open Application Group Integration Specification (OAGIS).

Below is a sample BOD:

```
<CONFIRM_BOD_003>
  <CNTROLAREA>
    <BSR>
      <VERB>CONFIRM</VERB>
      <NOUN>BOD</NOUN>
      <REVISION>003</REVISION>
    </BSR>
    <SENDER>
      <LOGICALID>XXX1234YYY</LOGICALID>
      <COMPONENT>G/L</COMPONENT>
      <TASK>CONFIRM</TASK>
      <REFERENCEID>REF1</REFERENCEID>
      <CONFIRMATION>0</CONFIRMATION>
      <LANGUAGE>ENG</LANGUAGE>
      <CODEPAGE>CP001</CODEPAGE>
      <AUTHID>JOE DOE</AUTHID>
    </SENDER>
    <DATETIME qualifier="CREATION">
      <YEAR>1998</YEAR>
      <MONTH>12</MONTH>
      <DAY>31</DAY>
      <HOUR>17</HOUR>
      <MINUTE>59</MINUTE>
      <SECOND>00</SECOND>
      <SUBSECOND>0000</SUBSECOND>
      <TIMEZONE>-0500</TIMEZONE>
    </DATETIME>
  </CNTROLAREA>
  <DATAAREA>
    <CONFIRM_BOD>
      <CONFIRM>
        <CNTROLAREA>
          <BSR>
            <VERB>UPDATE</VERB>
            <NOUN>INVENTORY</NOUN>
            <REVISION>002</REVISION>
          </BSR>
```

```

        <SENDER>
            <LOGICALID>XX141HG09</LOGICALID>
            <COMPONENT>INVENTORY</COMPONENT>
            <TASK>RECEIPT</TASK>
            <REFERENCEID>95129945823449</REFERENCEID>
            <CONFIRMATION>0</CONFIRMATION>
            <LANGUAGE>ENG</LANGUAGE>
            <CODEPAGE>CP001</CODEPAGE>
            <AUTHID>KURTC</AUTHID>
        </SENDER>
        <DATETIME qualifier="CREATION">
            <YEAR>1998</YEAR>
            <MONTH>06</MONTH>
            <DAY>15</DAY>
            <HOUR>08</HOUR>
            <MINUTE>14</MINUTE>
            <SECOND>00</SECOND>
            <SUBSECOND>0000</SUBSECOND>
            <TIMEZONE>-0600</TIMEZONE>
        </DATETIME>
        </CNTROLAREA>
        <STATUSLVL>00</STATUSLVL>
        <DESCRIPTN>THIS BOD HAS BEEN PROCESSED WITHOUT
ERRORS</DESCRIPTN>
        <ORIGREF>RCPT#12550699</ORIGREF>
        <USERAREA>USER1=FOO</USERAREA>
        <CONFIRMMSG>
            <DESCRIPTN>SYSTEM X SCREEN 123 OK
0.234SEC</DESCRIPTN>
            <REASONCODE>MISC</REASONCODE>
        </CONFIRMMSG>
    </CONFIRM>
</CONFIRM_BOD>
</DATAAREA>
</CONFIRM_BOD_003>

```

Control area

Control information is included on all transactions. This section provides the verb, noun, and the version definition that matches the transaction type. The Sender and DateTime information are provided here also. The control information for the BOD as well as generation of the global unique identifier (GUID) assist in making the messages distinguishable. The Business Service Request (BSR) is a list of services that the sending application requests of the receiving application. Only one BSR is allowed per BOD.

Below is a sample control area:

```
<CNTROLAREA>
  <BSR>
    <VERB>CONFIRM</VERB>
    <NOUN>BOD</NOUN>
    <REVISION>003</REVISION>
  </BSR>
  <SENDER>
    <LOGICALID>XXX1234YYY</LOGICALID>
    <COMPONENT>G/L</COMPONENT>
    <TASK>CONFIRM</TASK>
    <REFERENCEID>REF1</REFERENCEID>
    <CONFIRMATION>0</CONFIRMATION>
    <LANGUAGE>ENG</LANGUAGE>
    <CODEPAGE>CP001</CODEPAGE>
    <AUTHID>JOE DOE</AUTHID>
  </SENDER>
  <DATETIME qualifier="CREATION">
    <YEAR>1998</YEAR>
    <MONTH>12</MONTH>
    <DAY>31</DAY>
    <HOUR>17</HOUR>
    <MINUTE>59</MINUTE>
    <SECOND>00</SECOND>
    <SUBSECOND>0000</SUBSECOND>
    <TIMEZONE>-0500</TIMEZONE>
  </DATETIME>
</CNTROLAREA>
```

Data area

The Business Data Area (BDA) of the Business Object Document contains codes, parameters, and values needed to support the Business Service Request.

Below is a sample data area:

```
<DATAAREA>
  <CONFIRM_BOD>
    <CONFIRM>
      <CNTROLAREA>
        <BSR>
          <VERB>UPDATE</VERB>
          <NOUN>INVENTORY</NOUN>
          <REVISION>002</REVISION>
        </BSR>
        <SENDER>
          <LOGICALID>XX141HG09</LOGICALID>
          <COMPONENT>INVENTORY</COMPONENT>
          <TASK>RECEIPT</TASK>
          <REFERENCEID>95129945823449</REFERENCEID>
          <CONFIRMATION>0</CONFIRMATION>
          <LANGUAGE>ENG</LANGUAGE>
          <CODEPAGE>CP001</CODEPAGE>
          <AUTHID>KURTC</AUTHID>
        </SENDER>
        <DATETIME qualifier="CREATION">
          <YEAR>1998</YEAR>
          <MONTH>06</MONTH>
          <DAY>15</DAY>
          <HOUR>08</HOUR>
          <MINUTE>14</MINUTE>
          <SECOND>00</SECOND>
          <SUBSECOND>0000</SUBSECOND>
          <TIMEZONE>-0600</TIMEZONE>
        </DATETIME>
      </CNTROLAREA>
      <STATUSLVL>00</STATUSLVL>
      <DESCRIPTN>THIS BOD HAS BEEN PROCESSED WITHOUT
ERRORS</DESCRIPTN>
      <ORIGREF>RCPT#12550699</ORIGREF>
      <USERAREA>USER1=FOO</USERAREA>
      <CONFIRMSG>
        <DESCRIPTN>SYSTEM X SCREEN 123 OK
0.234SEC</DESCRIPTN>
```

```
        <REASONCODE>MISC</REASONCODE>
      </CONFIRMSG>
    </CONFIRM>
  </CONFIRM_BOD>
</DATAAREA>
```

Data type

The data type is the smallest element of data within the Business Data Area structure.

Below is a sample data type:

```
  <STATUSLVL>00</STATUSLVL>
  <DESCRIPTN>THIS BOD HAS BEEN PROCESSED WITHOUT
  ERRORS</DESCRIPTN>
  <ORIGREF>RCPT#12550699</ORIGREF>
  <USERAREA>USER1=FOO</USERAREA>
  <CONFIRMSG>
    <DESCRIPTN>SYSTEM X SCREEN 123 OK 0.234SEC</DESCRIPTN>
    <REASONCODE>MISC</REASONCODE>
  </CONFIRMSG>
```


Sample OAG message

Below you can see a Confirm_BOD OAG message using the OAG wrapping technique.

```
<?xml version="1.0" standalone="no"?>
<!--Revised original OAG Message from http://www.openapplications.org version 7.1-->
<!DOCTYPE Message SYSTEM "D:\IAFeB\Mayflower\Messages\Confirm BOD.dtd">
<Message id="T987663827" version="7.1" bodyType="OAG" timeStampCreated="20010503"
sourceLogicalId="BackEnd" authenticationId="SysAdmin" crfCmdMode="neverRespond"
destinationLogicalId="FrontEnd" txnScope="any">
  <CrfActionGroup bodyCategory="ConfirmBod" crfCmdMode="neverRespond">
    <KeyGroup keyGroupType="Partner" id="P9842">
      <AlternateId value="AC010101" sourceLogicalId="FrontEnd" state="exists"/>
    </KeyGroup>
  </CrfActionGroup>
  <COMMAND>
    <CONFIRM_BOD_003>
      <CNTROLAREA>
        <BSR>
          <VERB>CONFIRM</VERB>
          <NOUN>BOD</NOUN>
          <REVISION>003</REVISION>
        </BSR>
        <SENDER>
          <LOGICALID>XXX1234YYY</LOGICALID>
          <COMPONENT>G/L</COMPONENT>
          <TASK>CONFIRM</TASK>
          <REFERENCEID>REF1</REFERENCEID>
          <CONFIRMATION>0</CONFIRMATION>
        </SENDER>
      </CNTROLAREA>
    </CONFIRM_BOD_003>
  </COMMAND>
</Message>
```

```

    <LANGUAGE>ENG</LANGUAGE>
    <CODEPAGE>CP001</CODEPAGE>
    <AUTHID>JOE DOE</AUTHID>
  </SENDER>
  <DATETIME qualifier="CREATION">
    <YEAR>1998</YEAR>
    <MONTH>12</MONTH>
    <DAY>31</DAY>
    <HOUR>17</HOUR>
    <MINUTE>59</MINUTE>
    <SECOND>00</SECOND>
    <SUBSECOND>0000</SUBSECOND>
    <TIMEZONE>-0500</TIMEZONE>
  </DATETIME>
</CNTROLAREA>
<DATAAREA>
  <CONFIRM_BOD>
    <CONFIRM>
      <CNTROLAREA>
        <BSR>
          <VERB>UPDATE</VERB>
          <NOUN>INVENTORY</NOUN>
          <REVISION>002</REVISION>
        </BSR>
        <SENDER>
          <LOGICALID>XX141HG09</LOGICALID>
          <COMPONENT>INVENTORY</COMPONENT>
          <TASK>RECEIPT</TASK>
          <REFERENCEID>95129945823449</REFERENCEID>
          <CONFIRMATION>0</CONFIRMATION>
          <LANGUAGE>ENG</LANGUAGE>
          <CODEPAGE>CP001</CODEPAGE>
          <AUTHID>KURTC</AUTHID>
        </SENDER>
        <DATETIME qualifier="CREATION">
          <YEAR>1998</YEAR>
          <MONTH>06</MONTH>
          <DAY>15</DAY>
          <HOUR>08</HOUR>
          <MINUTE>14</MINUTE>
          <SECOND>00</SECOND>
          <SUBSECOND>0000</SUBSECOND>
          <TIMEZONE>-0600</TIMEZONE>
        </DATETIME>
      </CNTROLAREA>
      <STATUSLVL>00</STATUSLVL>
    </CONFIRM>
  </CONFIRM_BOD>
</DATAAREA>

```

```
                                <DESCRIPTN>THIS BOD HAS BEEN PROCESSED WITHOUT
ERRORS</DESCRIPTN>
                                <ORIGREF>RCPT#12550699</ORIGREF>
                                <USERAREA>USER1=FOO</USERAREA>
                                <CONFIRMSG>
                                <DESCRIPTN>SYSTEM X SCREEN 123 OK
0.234SEC</DESCRIPTN>
                                <REASONCODE>MISC</REASONCODE>
                                </CONFIRMSG>
                                </CONFIRM>
                                </CONFIRM_BOD>
                                </DATAAREA>
                                </CONFIRM_BOD_003>
                                </COMMAND>
</Message>
```

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This glossary defines terms and abbreviations used in this book. If you do not find the term you are looking for, see the *Index* or the **IBM Dictionary of Computing**, New York: McGraw-Hill, 1994.

A

API: Application Programming Interface

(1) A software interface that enables applications to communicate with each other. An API is the set of programming language constructs or statements that can be coded in an application program to obtain the specific functions and services provided by an underlying operating system or service program.

(2) In VTAM, the language structure used in control blocks so that application programs can reference them and be identified to VTAM.

C

Class

(1) A UML class. A description of an object. (2) refers to object oriented programming, a description of a set of similar objects.

D

DB2

An IBM relational database management system that is available as a licensed program on several operating systems. Programmers and users of DB2 can create, access, modify, and delete data in relational tables using a variety of interfaces.

E

EID: Enterprise Integration Domain

EIDBe: Enterprise Integration Domain Back-end

L

Log

A record of a sequence of operational activities on a computer.

M

MQSeries

Pertaining to a family of IBM licensed programs that provide message queuing services.

MQSFSE: MQSeries Financial Services Edition

A complete scalable messaging and information integration add-on to the MQSeries family of products. Especially designed for the needs of the financial services industry, MQSeries Financial Services Edition can integrate front-end systems with back-end systems using a hub/spoke architecture using XML as the common vocabulary across systems.

O**Object**

Instance of a class.

Open Application Group (OAG)

Markup language designed around manufacturing and retail sales.

Open Application Group Integration Specification (OAGIS)

A form of OAG.

P**Party**

Any person or organization that the insurance company has, or had, or may have a business interest in.

Q**Queue**

An MQSeries object. Message queuing applications can put messages on, and get messages from, a queue. A queue is owned and maintained by a queue manager. Local queues can contain a list of messages waiting to be processed. Queues of other types cannot contain messages: they point to other queues, or can be used as models for dynamic queues.

S**SQL: Structured Query Language**

A programming language that is used to define and manipulate data in a relational database. It is often embedded in general purpose programming languages.

U**UML: Unified Modeling Language****X****XML**

eXtensible Markup Language. XML is a markup language for message definition, and is an open and public domain standard. XML is a subset of SGML designed for easy implementation in commercial and web environments.