# Business Process Transformation
# Interface
# Functional Design Specification for IN-266
# FedEx Athens Interface

## SIGNATURE PAGE

By signing this section, the individuals identified below agree that they have reviewed and approved these Functional Design Specifications

The signatures below represent final approval and acceptance by Merial management representing Information Services (IS), Global Validation, and Quality Assurance.

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## TABLE OF CONTENTS:


1.0 Interface Description....4
2.0 Basic Business Needs....4
3.0 Design Details....5
4.0 Process Flow....5
5.0 Business Rules....7
6.0 Assumptions....7
7.0 Scheduling or triggering event....8
8.0 Authorization to submit/schedule....8
9.0 User Procedures....10
10.0 Launch Parameters....10
11.0 Log Output....10
12.0 Error Handling and Pre Validation....10
13.0 notifications....11
14.0 Restart Procedures....11
15.0 Data Layout....11
16.0 validation....14
17.0 Tables, views and/ or packages no longer used from 11.5.5: .... **Error! Bookmark not defined.**
18.0 current views modified during R12 IMplementation: **Error! Bookmark not defined.**
19.0 external contact information....14
20.0 Open Issues....15
21.0 Closed Issues....15

## 1.0 INTERFACE DESCRIPTION

Merial's Athens Distribution Center (DC) utilizes a Federal Express (a.k.a. FedEx) Ship Manager software interface program to extract shipment (delivery) information from the Oracle eBusiness Suite and send the delivery information to the FedEx Server via the internet. Effective April 2, 2012, FedEx has been chosen as the primary parcel provider for Merial and will be used to process shipments in the Athens DC for VRG, Samples, Frontline Consumer Satisfaction and other types of shipments. The FedEx Shipping Manager software will be connected to the Oracle eBusiness Suite through the Oracle database via an ODBC connection. This document covers the data content which will be transmitted to and from the FedEx Server.

The FedEx Ship Manager software package is its own application with its own VBA code that runs on a Microsoft (MS) Windows based workstation which is connected to the Merial network. A bar code scanner is used for scanning the 'ship-confirmed' delivery ID from the package label. Upon scanning the package label, the Ship Manager software program will extract delivery information like customer name, address, ship method code, shipping instructions and other data from the Oracle ERP Database tables. Custom views will be created to support the insertion and extraction of this information. After processing of the shipment within the Ship Manager software concludes, the associated tracking information for that shipment will be exported by inserting data back to the Oracle ERP System. This tracking information will be used by the Customer Care team to support tracking of shipments from the Athens DC. A custom table will be created within the Oracle ERP Database to store shipment tracking related information such as tracking number, package weight, delivery id and carrier shipping method.

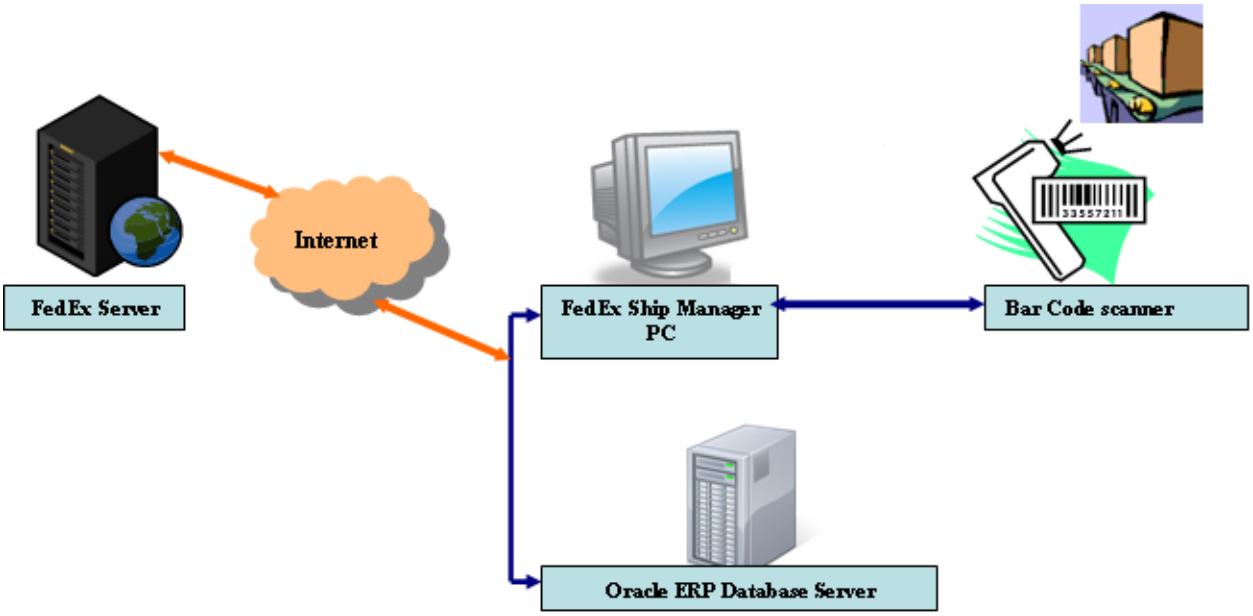
## 2.0 BASIC BUSINESS NEEDS

The Merial Athens DC will utilize the FedEx Ship Manager software interface to meet the following business needs:

- Send shipment and order header information to FedEx from Oracle for those shipments which are fulfilled out of the Athens DC
- Exports tracking number, package weight, delivery id and carrier shipping method for the shipments processed by the FedEx Ship Manager software back into the Oracle ERP system

## 3.0 DESIGN DETAILS

**High level view of the current and future state System**

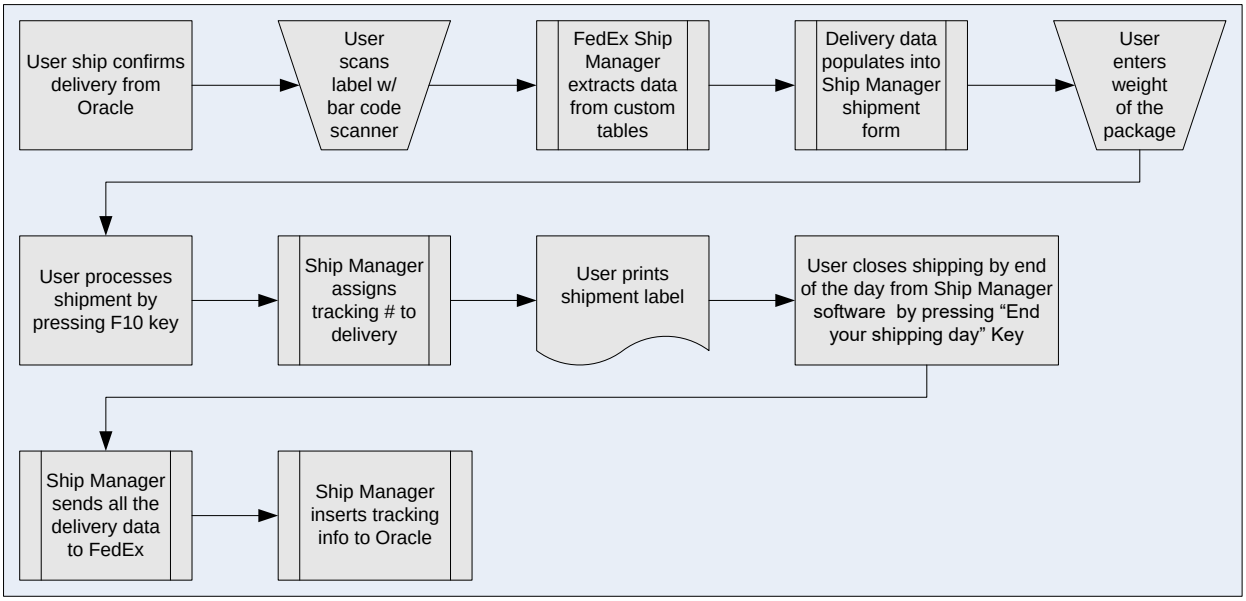



FedEx Ship Manager software runs on a FedEx-owned desktop PC. The bar code scanner is physically connected to the PC. Other than version updates, there will be no configuration changes on the PC or Ship Manager software. The Ship Manager software is connected to Oracle ERP database via an ODBC connection. ODBC connection settings on Ship Manager software has been created to connect to the R12 database tables using three custom Merial views, one Merial custom table and updated generic Oracle views designed to work with the 10g or higher Oracle database version with the Oracle ODBC Driver.

## 4.0 PROCESS FLOW

There will be no change to the process flow for processing shipments in the Athens DC.

## Current and Future State Process Flow Diagram



**Process Flow Narrative**

1. User ship confirms delivery within Oracle Shipping Execution Application.
2. User scans delivery_id from delivery label (a.k.a. pick ticket) with a bar code scanner that is attached to the FedEx Ship Manager software.
3. FedEx Ship Manager software extracts data from Oracle tables via keyed import (i.e. scanning or keying in the delivery_id).
4. Delivery data populates into FedEx Ship Manager software windows based shipment form.
5. User enters weight of the delivery package into FedEx Ship Manager software shipment form (i.e. either manually keying in the weight or auto populated from attached scale).
6. User processes the shipment by clicking on Process shipment button or pressing F10 key.
7. FedEx Ship Manager software assigns tracking number(s) to the delivery. Tracking number(s)
8. The FedEx shipment label(s) print from the FedEx Ship Manager software.
9. After each shipment, data is inserted (new record created) into the Oracle table each time a package or packages are shipped. When the user is done shipping for the day, user will close out the FedEx system using the 'end your shipping day' button. When the FedEx system is closed, that days shipping information is uploaded to FedEx.

## 5.0 BUSINESS RULES

- The Oracle delivery needs to be ship confirmed for the interface to work.

## 6.0 ASSUMPTIONS

- Oracle Order Management (OM) defaulting rule or routing functionality will populate ship method for all the deliveries. If neither of this functionality populates the Ship Method, the Customer Care User will manually populate this value.
- Any change in ship method will be done in Oracle.

- Customer address standardization has been performed for Ship To location on Athens DC shipment. This assumes that address standardization has been performed when Customer Ship To location was defined and for any updates which are performed to the address.
- If an attempt is made to manifest a delivery that is not ship confirmed, an error message should appear within the FedEx Ship Manager software indicating "Delivery ID____ not found. Please verify entered correctly and ship confirmed". This error message indicates that the delivery_id is not ship confirmed in Oracle.
- FedEx Ship Manager data extraction, import and export maps have been created to recognize the Oracle custom Views and Table. This includes the correct field level mappings have been put in place within each of the FedEx Ship Manager maps.
- FedEx will provide ongoing support and maintenance of the hardware and Operating System which the FedEx Ship Manager software runs on FedEx-owned PC. This includes hardware failures, Operating System updates, etc.
- ODBC Drivers for connecting to Oracle 10g or higher database have been created within the FedEx Ship Manager software.
- A unique Oracle Database user id (schema) has been created to allow access for extracting and importing data to Oracle. The schema name is 'FEDEX'.

## 7.0 SCHEDULING OR TRIGGERING EVENT

Inbound Shipment information imported into FedEx Ship Manager software:

This interface will run when the Athens DC shipper scans a delivery label utilizing the bar code scanner attached to the FedEx Ship Manager machine. The Delivery ID is scanned and entered into the lookup box on the screen. This will be performed several times a day.

Outbound Tracking information exported from FedEx Ship Manager software to Oracle ERP and to FedEx:

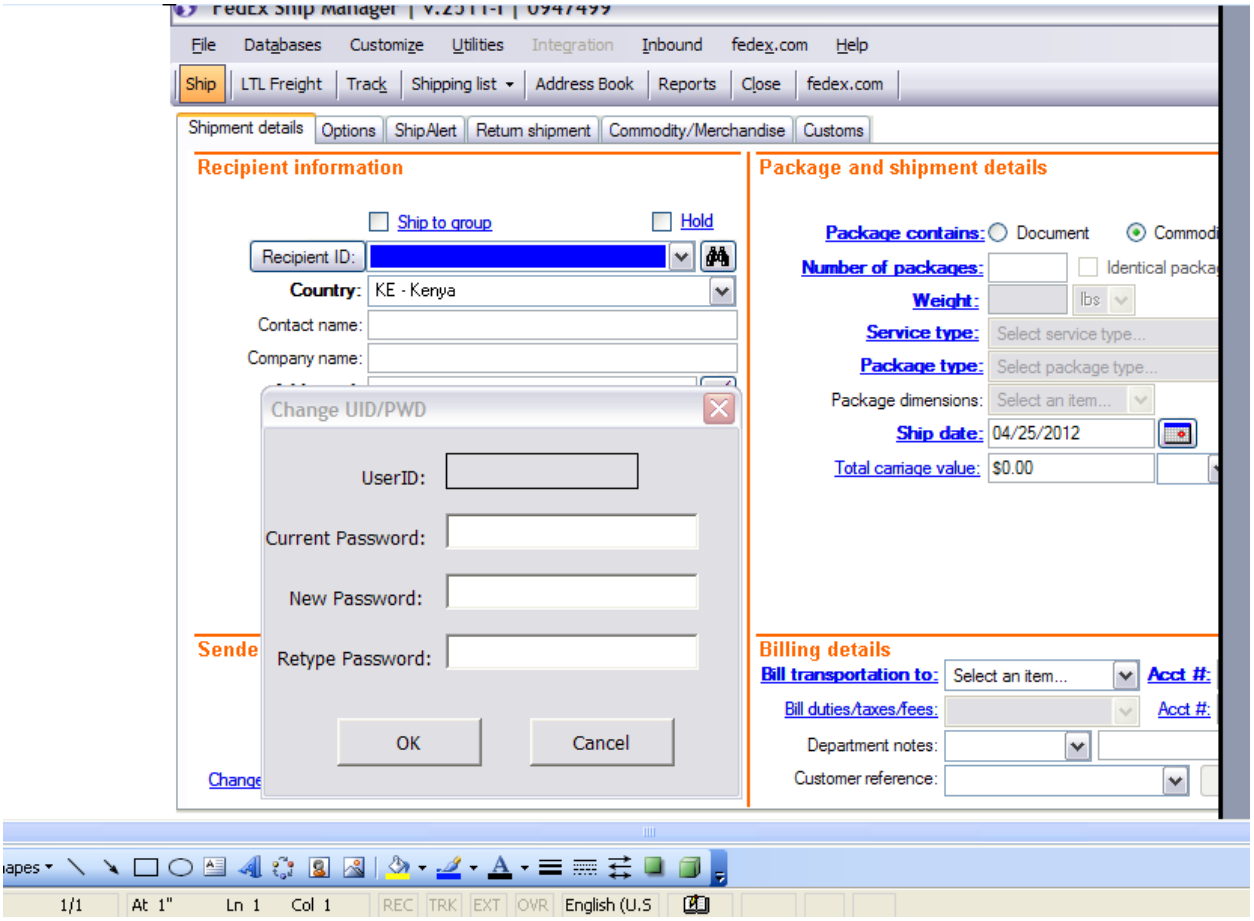
This interface runs once a day. FedEx Ship Manager software has the option of scheduling the shipping update. User initiates the transmission after each shipment is processed.

## 8.0 AUTHORIZATION TO SUBMIT/SCHEDULE

The Athens DC shipper(s) will have the access to the PC which runs the FedEx Ship Manager program. No Oracle responsibility is required to initiate the interface. Only the ODBC connectivity is required to initiate service.

## 9.0 SCHEMA SECURITY – ODBC CONNECTIVITY

During creation of the FedEx Athens interface, the DSN Oracle password was initially requested so that it could be hard-coded in the FedEx program. However, DSN Oracle passwords are known and managed only by the DBA team. Therefore, a request was made by the Merial DBA team to develop a solution where the password was protected but still allowed DBAs to update passwords without interrupting the interface. So to avoid potential SOX compliance issues, an access database file (/accdb) has been created for the 'FEDEX' schema password protection (fdx). The file is also encrypted. The FedEx program will access this file to get the Oracle ODBC (DSN) password. This file can be stored on the local FedEx system or a mapped drive. However, when the DSN Oracle password is updated, the DBA team must also access the FedEx computer (remotely or on site) and change the password in the FedEx Ship Manager software as well. The password file can be changed by using the keypad (ATL F12) when the software is running. Attached is a screenshot of the password form that will appear. If this step is not completed, the FedEx Ship Manager will not properly interface and services for Athens will be interrupted




## 10.0 USER PROCEDURES

FedEx Ship Manager software has a user guide. There is no special user procedure for the interface since all the data transmissions happen in the background.

## 11.0 LAUNCH PARAMETERS

There are no launch parameters. FedEx Ship Manager software is GUI based.

## 12.0 LOG OUTPUT

There is no log file that will be stored within the Oracle ERP database.

## 13.0 ERROR HANDLING AND PRE VALIDATION

The FedEx Ship Manager program will display the appropriate error message on the screen. This process will be performed for any system related error which occurs during the import of shipment information or extract of tracking information. There is no error handling or validation within the Oracle ERP System for this interface.

## 14.0 NOTIFICATIONS

Upon success/error completion of the interface, contact the following personnel:

| | | |
|---|---|---|
| Charles Davis | Manager Inventory Control & Athens Distribution (Business support) | (*phone/fax/email) 706-552-2202*<br>Charles.Davis@Merial.com |
| Letitia Sims | OCC PTM Analyst (technical support and author of version 2) | *(phone/fax/email)* 678-638-3908<br>Letitia.Sims@Merial.com |

## 15.0 RESTART PROCEDURES

FedEx Ship Manager program will handle any restart process, if needed.

## 16.0 DATA LAYOUT

The following charts list the fields to be included in the interface. These charts indicate the data element, a description of the data element, the business logic for that element (including if the field is required and any extraction or import logic necessary to successfully interface the data), and whether or not the field is required (Yes or No) from a business perspective.

Test Data preparation if any:

**Outbound from <Oracle> Applications to FedEx**
**MER_FEDEX_VIEW_FEDEX_V view**

| Data Element | Description | Business Logic | Required? |
|---|---|---|---|
| **State** | Ship to State | State/Province/County | Y |
| **Source_Header_Number** | Reference 4 for FEDEX | Delivery Details Source header ID from Oracle | Y |
| **Ship_To_ID** | Attention for FEDEX | Ship to Org Id from Oracle | Y |

| | | | |
|---|---|---|---|
| **Ship_Method_Code** | Service Type for FEDEX | Ship method | Y |
| **Postal_Code** | Ship to Postal code | | Y |
| **Order_Number** | Reference 2 for FEDEX | Oracle Order Number | Y |
| **Delivery_ID** | **Primary Key**: Reference 1 for FEDEX | Delivery Number | Y |
| **Customer_Name** | Customer Name | | Y |
| **Customer_ID** | Customer Number | | Y |
| **Country** | Ship To Country | | Y |
| **City** | Ship To City | | Y |
| **Atrribute1** | Customer Phone Number | | Y |
| **Address3** | Ship To Room/Floor | | Y |
| **Address2** | Ship To Department | | Y |
| **Address1** | Ship To Street Address | | Y |
| **Sender_ID** | Orgin ID | Key which designates Athens package data back to Merial Tracking Information Inquiry Screen for Customer Care usage | Y |

**Inbound to <Oracle> Applications from UPS**
**XXOTC_SHIPPING_TRK_INF_FEDEX_V View**

| Data Element | Description | Business Logic | Required? |
|---|---|---|---|
| Freight_Cost_ID | **Published Charge (3)** | | Y |
| Package Weight | **Weight** | | Y |
| Tracking Number | **Tracking** | | Y |

| | | | |
|---|---|---|---|
| | **Number** | | |
| Order Number | **Reference 2 for FEDEX** | | Y |
| Delivery_ID | **Reference 1 for FEDEX** | | Y |
| Sender_ID | **Reference 3 for FEDEX** | Key which designates Athens package data back to Merial Tracking Information Inquiry Screen for Customer Care usage | Y |

**MER_FEDEX_VIEW**

| Data Element | Description | Business Logic | Required? |
|---|---|---|---|
| Delivery_ID | | | Y |
| Customer_Name | | | Y |
| Address_ID | | | Y |
| Customer_ID | | | Y |
| Country | | | Y |
| Address1 | | | Y |
| Address2 | | | Y |
| Address3 | | | Y |
| Attribute1 | | | Y |
| City | | | Y |
| State | | | Y |
| Postal_Code | | | Y |
| Order_Number | | | Y |
| Ship_To_ID | | | Y |
| Ship_Method_Code | | | Y |

| | | | |
|---|---|---|---|
| Source_Header_Number | | | Y |
| Sender_ID | | | Y |

## 17.0 VALIDATION

- Verify "Ship To" data and customer information are populated correctly on FedEx Ship Manager GUI form after scanning the delivery id label. The "Ship To" information should match that found in the Oracle Sales Order for the Order Number provided.
- Verify tracking number was exported from FedEx Ship Manager and inserted into the custom table for the shipment(s) processed
- Verify the tracking information appears within the Oracle custom form "Merial Tracking Information Inquiry". This includes that the information is accurate.
- Verify the tracking number on FedEx website

## 18.0 EXTERNAL CONTACT INFORMATION

| | |
|---|---|
| *(name)*– FedEx Technical Support<br>*(company)*<br>*(FTP)*<br>*(URL)* | *(phone)* 1-877-339-2774<br>*(email)*<br>*(ID/Pass)* meter # 0756783<br>*(notes)* |
| | |
| *(name)*<br>*(company)*<br>*(FTP)*<br>*(URL)* | *(phone)*<br>*(email)*<br>*(ID/Pass)*<br>*(notes)* |
| | |
| *(name)*<br>*(company)*<br>*(FTP)*<br>*(URL)* | *(phone)*<br>*(email)*<br>*(ID/Pass)*<br>*(notes)* |
| | |

## 19.0 OPEN ISSUES

| ID | Issue | Resolution | Responsibility | Target Date | Impact Date |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

## 20.0 CLOSED ISSUES

| ID | Issue | Resolution | Responsibility | Target Date | Impact Date |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |