

260498

Aptean Ltd
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1.1 260498 - JB-7NHG8Z/ Line Level Integration

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2 Functional Overview

2.1 Client Requirement

LOTS Phase 2 : MTS Changes

- Change to Order interface between Bawtry Unison and MTS to include product line information.
- Allow storage of product line information into MTS
- Generate flag within MTS to identify Microlise client.

Phase 2 of LOTS requires product line information to be entered into MTS for integration with Microlise. We require product code, description and case qty. The understanding is that the product line information will be a pass through for and therefore will not need to be stored in MTS in any static data table.

2.2 Solution

The scope of MTS modifications covered in this estimate to support LOTS phase 2 developments is as follows and is inclusive of format changes to the XML message format and Microlise EDI flows and related processing in MTS;

- New Unison WMS orders flow loaded into MTS including line level information
- Modified MTS order updates (booking events) generated to LOTS
- New Trip and Trip updates generated simultaneously to LOTS and Microlise
- New Trip execution updates flow from Microlise to MTS
- Modified execution updates from LOTS to MTS
- Modified POD updates from MTS to LOTS (triggered from Tokairo or manual POD flag entry in MTS)

1 New Unison WMS orders flow loaded into MTS including line level information

Currently Unison orders are transferred into MTS using a CSV format data flow. This data transfer is controlled manually within Unison. Files of orders are generated in a Unison CSV format which is transformed by ESI into an MTS CSV format. MTS receives the orders files and creates transport orders identified uniquely by the customer (owner in Unison) and SO reference. This flow will remain unchanged and continue to be used as required in Consumer Networks controlled by site users.

A new Unison to MTS orders flow will be developed and data exchanged using the newly designed common XML format to support LOTS. A control screen in Unison will enable this interface separately for LOTS and for MTS. It is assumed that initially this will be configured so that Unison will send order and order update messages only for Reckitts to LOTS and for all owner customers managed from Bawtry to MTS. The implication being that the existing CSV will be superseded for Bawtry but still available for other sites. In simple terms, Bawtry won't need to run the CSV interface once the new XML flow is enabled. Other sites could take advantage of the new XML flow using the Unison configuration screen to enable functionality described above.

The XML flow will be automatically triggered from Unison from a configured set of WMS statuses and will contain the line level segment required to load order stock line details into MTS. The supported WMS status trigger points are any of created, allocated, pick listed, pick confirmed, despatched and cancelled.

MTS will accept order updates up until scheduled on an ACCEPTED status trip - this means order updates are rejected beyond PLANNED trip status. Any order update received will delete and recreate the item line data and update the DU level data in MTS to represent the latest position from the WMS process.

The MTS data model will be extended to allow stock line details to be stored. A new table will be included called SCH_ORD_ITEMS with the following columns;

OMS_REF (MTS unique order number) CUSTOMER (customer code) EXTERNAL_REF (SO customer reference)
 PRODUCT_TYPE (product code e.g. AMBIENT) ITEM_IDENTIFIER (Unison sock code) ITEM_AKA_CODE (alternative stock code of retailer) ITEM_DESCRIPTION (stock description) ITEM_FACTOR (UOM, e.g. CASE) LIFTS STACK
 QTY_ORDERED QTY_TO_DELIVER QTY_DELIVERED WEIGHT VOLUME

A subordinate table to this will be created called SCH_ORD_ITEMS_REASON and this will allow MTS to store multiple reason code and qty discrepancies. This change is in anticipation of MTS receiving delivery confirmation information from Microlise at item line level.



OMS_REF (MTS unique order number) CUSTOMER (customer code) EXTERNAL_REF (SO customer reference) PRODUCT_TYPE (product code e.g. AMBIENT) ITEM_IDENTIFIER (Unison sock code) REASON_CODE (Reason discrepancy) QTY (plus or minus discrepancy)

MTS will be modified to look for XML orders files on a polling cycle. The data will be loaded into Interface error tables as normal (although extended to carry the additional line level data) and validated using existing rules. If successfully validated the order records, order line and items will be written to MTS order tables. A unique OMS reference will be generated as normal.

The XML order format for Consumer will carry ?order details? at line level which means the MTS interface will be modified to calculate DU level information for the order. This will be done using the message product type (order line for each), default DU type for the product, a calculated DU QTY and sum of item line weight, volume and case qty. RPE will be derived as now from the calculated DU QTY. DU QTY will be calculated by summing the number of lifts (and rounding up) for each stack value.

The MTS Order Details screen will be modified to include a new tab for Items. The view will be designed to look like the ?body? of the delivery note and will show stock code, alternative stock code, description, UOM, ordered qty, to deliver qty and delivered qty. The view will allow right click on a stock line to drill down to see a list of discrepancy reasons and plus or minus qty counts.

2 Modified MTS order updates (booking events) generated to LOTS

For LOTS phase 1, MTS creates a message to update the order (SO reference) in LOTS when;

Booking in flag is ticked (denoting the delivery time window is agreed at delivery location) Or The order late delivery date/time is changed Or The order is cancelled on MTS

These trigger points will remain unchanged. The message creation processing will be modified to generate the data in the new XML format using the order segments (not trips segments as these events are before planning).

3 New Trip and Trip updates generated simultaneously to LOTS and Microlise

The new XML format has been designed to allow a complete Trip to be messaged from MTS to either LOTS or Microlise or both simultaneously. The structure of the message allows MTS to send trip header and detail, stop header and detail, order header and order detail (inclusive of either order line stock items or DU level) data to LOTS and Microlise.

The triggers to send a trip message will differ between LOTS requirements and Microlise requirements; however MTS will always send a complete data set of all the trip stops on a trip. For LOTS only the orders for LOTS enabled owner customers will be included for the relevant stops. For Microlise, all customer orders will be included.

For LOTS, MTS will trigger a trip message when LOTS enabled customer orders (or rebooked orders, customer collections and factory collections) are planned onto a trip (scheduled or sched_coll) And When a carrier is assigned or changed on the trip. And When a Vehicle is assigned that is Microlise enabled (LOTS needs to know which trips are Microlise executed and this will not be known until resource is allocated to a trip).

Note that a trip message sent to LOTS could represent a mixed customer load with multiple delivery stops, for example (where SC JOHNSON is not LOTS enabled and RECKITTS is LOTS enabled);

Stop 1 has SC JOHNSON order - only the stop data segments will be sent to LOTS - no order detail Stop 2 has RECKITT order - stop and order segments sent to LOTS including item line level Stop 3 has SC JOHNSON and RECKITT order - stop segment sent but only the RECKITTS order detail.

For Microlise a mechanism is needed to define which trips are messaged from MTS. This largely depends on which vehicles are enabled in the Bawtry fleet. The resource maintenance in MTS will be modified to allow each vehicle equipped (tractor) to be flagged accordingly with the execution enabling system name. This means trip messages will only be generated for trips assigned to Microlise equipped vehicles. This would include where a Bawtry fleet vehicle might be sub-contracted to another DHL site.

The trigger to generate a trip message to Microlise will be;

A trip set to EN-ROUTE status for a Microlise enabled vehicle



The XML message format enables MTS to send either item line level or DU level data (as the order detail segment of an order). MTS will populate the data structure as item line if available and otherwise at DU level.

4 New Trip execution updates flow from Microlise to MTS

Microlise will send execution updates to both LOTS and MTS. Essentially Microlise will send the same trip message back to MTS supplemented with stop and order detail actual times and any non-conformance and reason codes.

The execution updates will provide actual departure from trip startup (SU) location and will accordingly set the trip status to EN_ROUTE. Actual arrival and departure at trip stops will be captured. The actual qty delivered of the order details (whether provided originally by MTS at item level or DU level) and multiple non-conformance qty and reason codes will also be captured. These updates will be visible in MTS in the new orders detail tab (for item line qty) and the order tracking and debrief screens (for actual stop times) in MTS.

Microlise will not provide actual DU qty (whether expressed as lifts or units delivered) for MTS if stock line level data is being used by Microlise to confirm deliveries as will be the situation for Consumer Networks. Similarly, Microlise will provide non-conformance updates at stock line level for Consumer Networks and non-conformance at DU level in MTS will either not be entered or completed manually.

The trip update message will be pushed to the MTS server by ESI. MTS will poll for new trip files and these will be loaded and validated through a new interface errors table and screen.

5 Modified execution updates from LOTS to MTS

Actual trip stop times, delivered quantities and non-conformance reason codes can be manually entered in LOTS. This will usually be for non Microlise enabled trips. This debrief information is messaged to MTS and provides data to update as described in the section above.

This functionality already exists in MTS from Phase 1 LOTS but will need to be enhanced to align with the new XML data formatting.

6 Modified POD updates from MTS to LOTS (triggered from Tokairo or manual POD flag entry in MTS)

Similarly, the existing data flow of POD flag from MTS to LOTS will need to be enhanced to align with the new XML data formatting.

The trigger for this message from MTS to LOTS is simply based on the delivery POD flag being set to Y for the order. This can be set automatically from the in message into MTS from Tokairo or set manually through debrief functionality within MTS.

Microlise data will not update the MTS POD flag so as not to interfere with the Tokairo - MTS - LOTS updates.

2.3 Scope

This change will be applied to system version 10.6.

2.4 Data

System Parameters are required for the Inbound flow.

WMS_INBOUND_PATH - Area where files are placed to be processed
 WMS_INBOUND_ARCH - Area where processed files are placed.
 WMS_INBOUND_FAIL - Area where failed files are placed.
 WMS_INBOUND_ORD_IDENTIFIER - Filename Prefix for Order files
 WMS_INBOUND_ALC_IDENTIFIER - Filename Prefix for Allocate files
 WMS_INBOUND_MAR_IDENTIFIER - Filename Prefix for Mar files
 WMS_INBOUND_LOA_IDENTIFIER - Filename Prefix for Load files
 WMS_INBOUND_CAN_IDENTIFIER - Filename Prefix for Cancellation files
 WMS_INBOUND_LISTING_NAME - List which will hold files to be processed.
 WMS_LISTING_SCRIPT_NAME - Script will process the files



New sequence seq_int_xml_ord will be created to add a unique reference to the new tables.

New control table INT_XML_CONTROL will be used by triggers to inform the database job that an outbound XML is required.

This table will have a trigger to populate some fields including the unique identifier populated by the new sequence seq_int_xml.

Also new system parameters required for the outbound flow to LOTS :-

LOTS_OUTBOUND_PATH - Area where files are placed once processed LOTS_OUTBOUND_ARCH - Area for a safe copy of processed files. LOTS_OUTBOUND_FAIL - Area where failed files are placed.

Also new system parameters required for the outbound flow to Microlise :-

MIC_OUTBOUND_PATH - Area where files are placed once processed MIC_OUTBOUND_ARCH - Area for a safe copy of processed files. MIC_OUTBOUND_FAIL - Area where failed files are placed.

If the file is to be automatically FTP'd out to ESI rather than waiting on ESI to collect it then the additional parameters are also required :-

MIC_FTP_DESTINATION_IP_ADDRESS - IP of destination machine MIC_FTP_DESTINATION_PORT - Port on destination machine MIC_FTP_DESTINATION_DIRECTORY - Directory on destination machine
 MIC_FTP_DESTINATION_USERNAME - Username to logon to destination machine
 MIC_FTP_DESTINATION_PASSWORD - Password for the user logon

Inbound from Microlise :-

MIC_INBOUND_PATH -Path for yet to be processed XML files from Microlise MIC_INBOUND_FAIL -Path for Microlise XML failures MIC_INBOUND_ARCH -Path for Microlise XML archiving MIC_INBOUND_IDENTIFIER -Pattern for MIC Trip Inbound MIC_INBOUND_LISTING_NAME -Filename for list of files in directory for MIC XML
 MIC_LISTING_SCRIPT_NAME -Script name for MIC XML Trip Inbound

Inbound from LOTS :-

LOTS_INBOUND_PATH -Path for yet to be processed XML files from Microlise LOTS_INBOUND_FAIL -Path for Microlise XML failures LOTS_INBOUND_ARCH -Path for Microlise XML archiving LOTS_INBOUND_IDENTIFIER -Pattern for MIC Trip Inbound LOTS_INBOUND_LISTING_NAME -Filename for list of files in directory for MIC XML
 LOTS_LISTING_SCRIPT_NAME -Script name for MIC XML Trip Inbound



3 Functional Description

3.1 File Retrieval

The inbound files will be placed in the directory specified in the system registry setting WMS_INBOUND_PATH. By default this will be /webint/<dbname>/interface/WMS/IN.

A database job will be set up to run at a set interval (by default this is every 5 minutes). The job will call the new package INT_XML passing in the required parameters. These parameters have been detailed above.

Within INT_XML a call will be made to the existing DP_FILEHANDLING package. This package will retrieve the files from the server so they can be processed into MTS.

3.2 Data Extract

Once the files have been retrieved the data will be extracted using XML_EXTRACT. The data will then be validated and stored in INT XML ORD HEADER and INT XML ORD DETAIL.

There are a number of fields that are validated before the file can be loaded successfully.

Early Available Date - Date must be valid Late Available Date - Date must be valid Early Delivery Date - Date must be valid Late Delivery Date - Date must be valid Booking Date - Date must be valid From Location - Cannot be Null To Location - Cannot be Null Customer - Must exist in MTS Cost Centre - Must exist in MTS Source System - Must exist in MTS Delivery Type - Must exist in MTS Group Name - Must exist in MTS

Each order in the file will be validated separately, so if one order fails validation the others will continue to load.



If the order passes validation a record will be inserted into INT_XML_ORD_HEADER, and one or more records will be inserted into INT_XML_ORD_DETAIL.

3.3 Order Creation

Once the data from the file has been loaded into the interface table orders can be created. One order is created for each valid INT_XML_ORD_HEADER record.

If the file is of type ORD a new order will be created. An OMS ref will be generated for each order and a schedule created if a suitable one does not already exist.

If the file is of type ALC, MAR or LOA then the order within the file will be updated. The External Ref (SO_REF) will be used to find the existing order in MTS. If the order does not exist an appropriate error will be displayed. If the order does exist the order will be updated with the new data from the file.

If the file is of type CAN, the order will be cancelled. Again the External Ref will be used to locate the file in MTS, and the order status will be set to Cancelled. No further changes will be made to the order for a file type of CAN.

Order details for 2073250

ORDERS v2.108
MTS v10.5.0

Status	Orms Ref	Booking Ref	Booked In	Customer Ref	Del Point Ref										
UN_SCHEDULED	2073250	TE OUR ORD	<input checked="" type="checkbox"/>	SB00148938	2/280474	Lookup...	View POD								
Detail Order Items Add Detail MTM Info Audit Audit Archive Finance Non Conformance Payments Savings Trip Detail															
Cost Centre	EXEL	Customer	RECKITTHEAL	Schedule	090424										
Template ID		Group Name			EXELBAWT										
Collect From	EXELBAWT	Bawtry_Exel Bawtry_DN11 9HE													
Deliver To	NUMAWREX	Wrexham_Numark Trading Ltd_LL13 7TF			<input type="checkbox"/> Show Inactive locations										
Current Location					Temp Combo	<input type="button" value="▼"/>									
Collect times	24/04/09 15:59	to	24/04/09 23:59	Target	<input type="text"/>	<input type="text"/>	<input checked="" type="radio"/> Standard times <input type="radio"/> Collection Time Target <input type="radio"/> Delivery Time Target <input type="radio"/> Open Window								
Delivery times	24/04/09 23:54	to	24/04/09 23:59	Target	<input type="text"/>	<input type="text"/>									
Planned								Actual							
Product Type	DU Type	Qty	Weight	Volume	Cases	RPE	Despatched	Delivered	Weight	Volume	Special Flag				
AMBIENT	CHEP PALLET	1.000	125.26	1.00000	94	1.00									
Original Date <input type="text"/> 1.000 125.26 1.00000 94 1.00												<input style="float: right; margin-right: 5px;" type="button" value="+"/> <input style="float: right; margin-right: 5px;" type="button" value="-"/>			
Special Instructions <input type="text"/>															
New Order View Info Save Close Re-book															

3.4 Decoding Values

The from location (address ID DEP) and the to location (address ID DEL) will be decoded to match values setup in MTS.



Import Maintenance

Config Decodes Decodes Audit Formulae

Save Cancel Close

Decode Name	Decode Type
0054	LOCATION
CN_LOCATION_MAPPING	LOCATION
EFX_OWNING_DEPOT	LOCATION
EFX_TRAILER_TYPE	TRAILER TYPE
PARAGON_LOCATIONS	LOCATION

Add Delete

Source Value	Target Value	Customer Id
KIM0003273001	ACCAPRIO	ACCANTIA
PAU0003328001	ACCAPRIO	ACCANTIA
140257001	ACCASAMP	ACCANTIA
202331001	ACCASAMP	ACCANTIA
154774001	ACCASOLI	ACCANTIA
0000201639001	AIR CRAW	ACCANTIA
201951001	ALBEACCR	ACCANTIA
L201951001	ALBEACCR1	ACCANTIA
0000139130001	ALDIATHE	ACCANTIA
0000149923001	ALDICHEL	ACCANTIA
0000139129001	ALDIDARL	ACCANTIA
0000201635001	ALDIDUBL	ACCANTIA
0000139132001	ALDIMIDD	ACCANTIA

Add Delete

The source value is taken from the file, and the target value is the equivalent in MTS. Each customer can have their own values setup.

The customer can also be decoded. This is done using the LOTS_OWNER field on the Customers data table. The Lots Owner will be the value passed in from the inbound file, this is translated to the MTS value which is then used when creating the order.

In example below the value passed in from the file is ?173? which is translated to ?RECKITHEAL?

Customers

CUST_COST v2.37
MTS v10.5.0

Customers Customer Group Cost Centres

Customer ID	Customer Name
RAMABELL	Reckitt Benckiser Healthca
RANBAXY	Contact Name
RANSOM	MTM Customer Code
RBOUTSIDE	Customer Group
RDI	Customer Type
REC03	Late Order Days Threshold
RECK EXPORT	Interface Orders to LOGNET
RECKITT	Unison Interface Value
RECKITTHEAL	POD document available
RECKITTHEOUSE	Consolidate Orders
REDDYS	Country
REHAU	United Kingdom
RETAIL BRAND	No.
	Location
	Address
	Bawtry_Exel Bawtry
	High Common Lane
	Tickhill
	Doncaster
	Town
	County
	Postcode

Order Revenue Charging Type Allocation Method

LOTS Owner

New Delete Cancel Save Close



3.5 LOTS Order Outbound Changes

There is already a trigger in MTS written for LOTS phase 1 which is used for sending a BOO/RBO message to LOTS when the Booked In flag is initially set or the Late Delivery Date/Time is changed.

For LOTS phase 2 this trigger will be changed to populate the new INT_XML_CONTROL table.

Also a similar trigger exists for sending a SCN message to LOTS when the POD flag is ticked (this is updated automatically when an appropriate message is received from Tokairo) to indicate that the Delivery Note has been scanned into Tokairo and can be viewed via the appropriate link in LOTS.

Again for phase 2 this will write to the new INT_XML_CONTROL table instead of the existing lots table.

Yet another trigger exists for sending a CAN message when orders are cancelled.

Again for phase 2 this will write to the new INT_XML_CONTROL table instead of the existing lots table.

These will all be treated by LOTS as amendments to the orders that it will have already received from WMS.

Within phase 2 there is no scope for MTS to send orders entered manually within MTS to LOTS as ORD messages as not all of the required fields will be known by MTS. The database job that picks up the lots records and creates the lots interface file will be replaced by a new database job that will pick up the records from the new INT_XML_CONTROL table and create the interface file in XML format.

3.6 TRP Message to LOTS

On certain new triggers then an appropriate TRP XML message will need to be sent to LOTS.

The triggers for LOTS are :-

Adding or removing Orders (related to a LOTS customer) from a Trip.

Updating a Trip (which has at least one Order related to a LOTS customer) to status ACCEPTED, EN-ROUTE or DELETED.

Carrier_ID, Driver_ID or Tractor_ID is changed on a trip at status ACCEPTED or EN-ROUTE (which has at least one Order related to a LOTS customer).

A database job will run at regular intervals and identify any TRP messages that need sending to LOTS and produce the file in the XML format specified in appendix A using the system registries for the folder name.

A safe copy of the file will be kept in the archive folder.

NB) All stops for the trip will be sent to LOTS but only Orders that are for customers that are LOTS related will be sent on the stop that the order is being unloaded on.

3.7 TRP Message to Microlise

On certain new triggers then an appropriate TRP XML message will need to be sent to Microlise.

It will also need to be FTP'd to ESI.

In order to identify whether Microlise needs the TRP message sent for a trip then an additional field TRACKING_ENABLED will be added to the Tractor and Trailer tables along with there corresponding maintenance form



(RESOURCE).

If this is set to MICROLISE for the tractor assigned to the trip or is set to MICROLISE for the trailer assigned to the first stop on the trip then a TRP message is required for Microlise.

In addition there is a system registry ?MIC_SEND_ACCEPTED? which is used to indicate whether message are to be sent to Microlise when the Trip is as ACCEPTED status or only when EN-ROUTE.

The triggers for Microlise are similar to those for LOTS and are :-

Updating a Trip status to EN-ROUTE, DELETED or ACCEPTED (and MIC_SEND_ACCEPTED is set to Y) and the trip has a tractor that is Microlise enabled or the first stop has a trailer that is Microlise enabled.

Carrier, Driver or Tractor is changed for a Trip at status EN-ROUTE, DELETED or ACCEPTED (and MIC_SEND_ACCEPTED is set to Y) and the trip has a tractor that is Microlise enabled or the first stop has a trailer that is Microlise enabled.

Changing the actual despatched quantity on an order line for an order on a trip at status ACCEPTED (and MIC_SEND_ACCEPTED is set to Y).

Changing the Trailer on stop 1 for a trip at status EN-ROUTE or ACCEPTED (and MIC_SEND_ACCEPTED is set to Y) and the trip has a tractor that is Microlise enabled or the old/new trailer is Microlise enabled.

Changing the planned arrival or departure times on a stop for a Trip at status EN-ROUTE or ACCEPTED (and MIC_SEND_ACCEPTED is set to Y) and the trip has a tractor that is Microlise enabled or the first stop has a trailer that is Microlise enabled.

Adding or removing Orders from a trip at status EN-ROUTE or ACCEPTED (and MIC_SEND_ACCEPTED is set to Y) and the trip has a tractor that is Microlise enabled or the first stop has a trailer that is Microlise enabled.

A database job will run at regular intervals and identify any TRP messages that need sending to Microlise and produce the file in the XML format specified in appendix A.

The XML will include all stops on the trip and all orders on the trip.

The orders will be under the stop whose location does not match the hub location for the carrier on the order.

The file will then need to be FTP'd to ESI using the system registries described earlier.

A safe copy of the file will be kept in the archive folder.

3.8 Microlise Update to MTS

All messages provided by Microlise via ESI to MTS will be in the standard XML format (see appendix A).

There are 3 types of message provided by Microlise at different times of the trip life cycle :-

System Events when the driver arrives or leaves a location (breaks a Geo Fence).

PodPoc messages when the driver confirms the delivered quantities on an order.

Journey Summary when the trip is completed.

A database job will be run at regular intervals to check if any new files of the correct name have been placed in the appropriate folder.



The data will then be loaded and used to update MTS and then moved into either the failures or the archive folder.

The system event message will be used to update the actual arrival and departure times for the appropriate trip stop. These times will be updated even if they have already set.

The podoc will again be used to update any arrival/departure times not provided by system events and also to update the delivered quantities on either the order lines or the order items as appropriate. It will also create the appropriate non-conformity records with matching reason codes. The actual times will only be updated if they are currently blank.

The journey summary will also be used to update any missing actual arrival or departure times (only update blank times) as well as providing the fuel drawn and ODO readings for the trip.

An interface trip stop record will be written for every trip stop in the interface to show the trip stop information that was loaded.

On successful completion of the MTS update then this will be marked accordingly.

If there are any errors with the data at trip stop level occur then an appropriate error will be written to the trip stop interface record.

Also an interface order record will be written for every order in the interface to show the order level information (additional levels for details and non-conformities). On successful completion of the MTS update then this will be marked accordingly.

If there are any errors with the data at order level then an appropriate error will be shown. If the error is at a lower level (line or reason code) then an error is also written at this lower level.

When an actual departure time is provided for the first stop on a trip and the system registry ?TRM_SET_TO_ENROUTE_AFTER_ACTUALS? is set then the trip will be moved to status EN-ROUTE.

When all of the orders on a trip have had there despatched quantities and delivered quantities populated (even with zero) and all of the actual arrival and actual departure times for all of the stops on the trip have been populated by Microlise then depending on a new system registry ?MIC_SET_TO_COMP_CONF? then the trip status will be moved onto to ?COMPLETED? or ?CONFIRMED? on completion of the Microlise updating.

3.9 LOTS to MTS Updates

LOTS will also send updates to MTS via the standard XML format.

Another database job will be run at regular intervals to check if any new files of the correct name have been placed in the appropriate folder.

The data will then be loaded and used to update MTS and then moved into either the failures or the archive folder.

There will only be one type of message from LOTS and it will be similar to the Microlise podoc message.

The provided XML file will be split into updates to a trip stop and updates to the order for delivered quantity and any non-conformities.

The message will be used to update any arrival/departure times not already populated in MTS and also to update the delivered quantities on either the order lines or the order items level as appropriate. It will also create the appropriate non-conformity records with matching reason codes.

On successful completion of the MTS updates then these record will be marked accordingly.

If there are any errors with the data at trip stop level occur then an appropriate error will be written to the trip stop interface record.



Also an interface order record will be written for every order in the interface to show the order level information (additional levels for details and non-conformities). On successful completion of the MTS update then this will be marked accordingly.

If there are any errors with the data at order level then an appropriate error will be shown. If the error is at a lower level (line or reason code) then an error is also written at this lower level.

3.10 Interface Errors

3 new tabs will be added to the INT_ERR screen so that the Inbound files at Order Level or Trip Stop level can be monitored and also the XML outbound files.

The XML Orders tab will include a section for the header information and a section for the details. Each will include a field to display any errors that have occurred during the file integration and order creation \ update.

The data can be filtered on Message type, Customer, From Location and success \ failure.

The screenshot shows the 'Interface Errors' screen with the following details:

- Header:** INT_ERR v1.31, MTS v10.5.0
- Toolbar:** Includes buttons for navigation (Back, Forward, Home, Help, Clear), search, and a 'Search' button.
- Tab Bar:** Orders, EMTS Orders, LOGNET m..., Bookings, DSG Trip D..., POD Details, LOTS, XML Orders (selected), XML Trips, PO Inbound, PO Outbound, XML Outbound.
- Filter Bar:** Msg Type (dropdown), Customer (dropdown), From Loc (dropdown), and a Search button.
- Table:** A grid of order data with columns: Interface ID, Msg Type, Status, Cost Centre, Customer, From Loc, To Loc, Sched Name, Early Avail, Late Avail, Early Del. The data shows multiple entries for WMS_TMS_414110 with various statuses (ALC, FAILURE, ORD) and locations.
- Buttons:** A checkbox for 'Include Success' and 'Order Detail Validation Error'.
- Message Boxes:**
 - Top Box:** WOE IN INT_XML.Post_Order_Line: ORA-00001: unique constraint (MTS_OWNER.PK_ORDER_ITEMS) violated
 - Bottom Box:** WOE IN INT_XML.Post_Order_Line: ORA-00001: unique constraint (MTS_OWNER.PK_ORDER_ITEMS) violated
- Buttons at Bottom:** Close, Action.

This tab will show orders imported to MTS from WMS for order creation/amendment and also imports from both Microlise and LOTS for debriefing the order (delivered quantities and non-conformities).

Only the pocpod messages from Microlise will be visible on this tab as the other message types relate to trips only.

Do we need to add the reason code level to the bottom of this tab ?

The XML Trip tab will show the interfaced XML records at trip stop level.

The source will allow you to select which XML flow you which to query on.

The ?Include Success? check box will allow queries on just the Failures.



This tab will show imports from both Microlise and LOTS.

All 3 types of messages from Microlise will be shown in this tab.

XML Outbound Tab will show all of the outbound XML flows.

The source will allow you to query just the flow (External System) that you are interested in.



Interface Errors									
INT_ERR v1.33 MTS v10.5.0									
Source	External System	Trip Sched	Trip ID	Trip Status	OMS Sched	OMS Ref	Customer	Processed	
TMS_BEIG_MTSTST_TRP_2009050715590864	BEIG	090507	MAN-00461715	ACCEPTED				<input checked="" type="checkbox"/>	<input type="checkbox"/>
	CIM	090507	MAN-00461715	ACCEPTED				<input type="checkbox"/>	<input checked="" type="checkbox"/>
TMS_LOTS_MTSTST_BOO_2009050116314117	LOTS				090426	994666	RECKITTHEAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TMS_LOTS_MTSTST_BOO_2009050111215129	LOTS				090424	994566	RECKITTHEAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	CIM	080923	MAN-00456695	ACCEPTED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	070921	MAN-00435445	ACCEPTED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	070921	MAN-00434293	EN-ROUTE				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	070921	MAN-00435277	EN-ROUTE				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	070921	MAN-00437551	EN-ROUTE				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461636	ACCEPTED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461635	ACCEPTED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461615	DELETED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461616	DELETED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461616	ACCEPTED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461615	ACCEPTED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461576	DELETED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461577	DELETED				<input type="checkbox"/>	<input type="checkbox"/>
TMS_LOTS_MTSTST_TRP_2009050712275539	LOTS	090427	MAN-00461595	PLANNED				<input checked="" type="checkbox"/>	<input type="checkbox"/>
TMS_LOTS_MTSTST_BOO_2009042914123855	LOTS				090427	994647	RECKITTHEAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TMS_LOTS_MTSTST_BOO_2009042914123855	LOTS				090426	994646	RECKITTHEAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461576	ACCEPTED				<input type="checkbox"/>	<input type="checkbox"/>
	CIM	090516	MAN-00461575	DELETED				<input type="checkbox"/>	<input type="checkbox"/>

[Close](#) [Action](#)

This will include data for the LOTS XML interface and also the Microlise interface.

When initially triggered from within the MTS system the records will have a blank filename and the processed check box will not be ticked.

Once the database job kicks in and processes the records then the processed box will become checked and the filename will be populated.

3.11 Line Level

To facilitate the input of line level data a new tab will be created on the Orders screen. This will display the line level information for a particular order. The data will be stored in a new table SCH_ORD_ITEMS.



The inbound order flow will be amended to accept and process order files with additional order item information. The existing table INT_XML_ORD_DETAILS will be reused to store the inbound data.

When the orders are created the line level data will be inserted into the SCH_ORD_ITEMS table. This information will then be consolidated to create the SCH_ORDER_LINE data.

The items lines will be grouped by product type (E.G. Ambient). The values for each line will then be combined to give a total for the product type which will be displayed at the line level.

Order details for 2073250

ORDERS v2.108
MTS v10.5.0

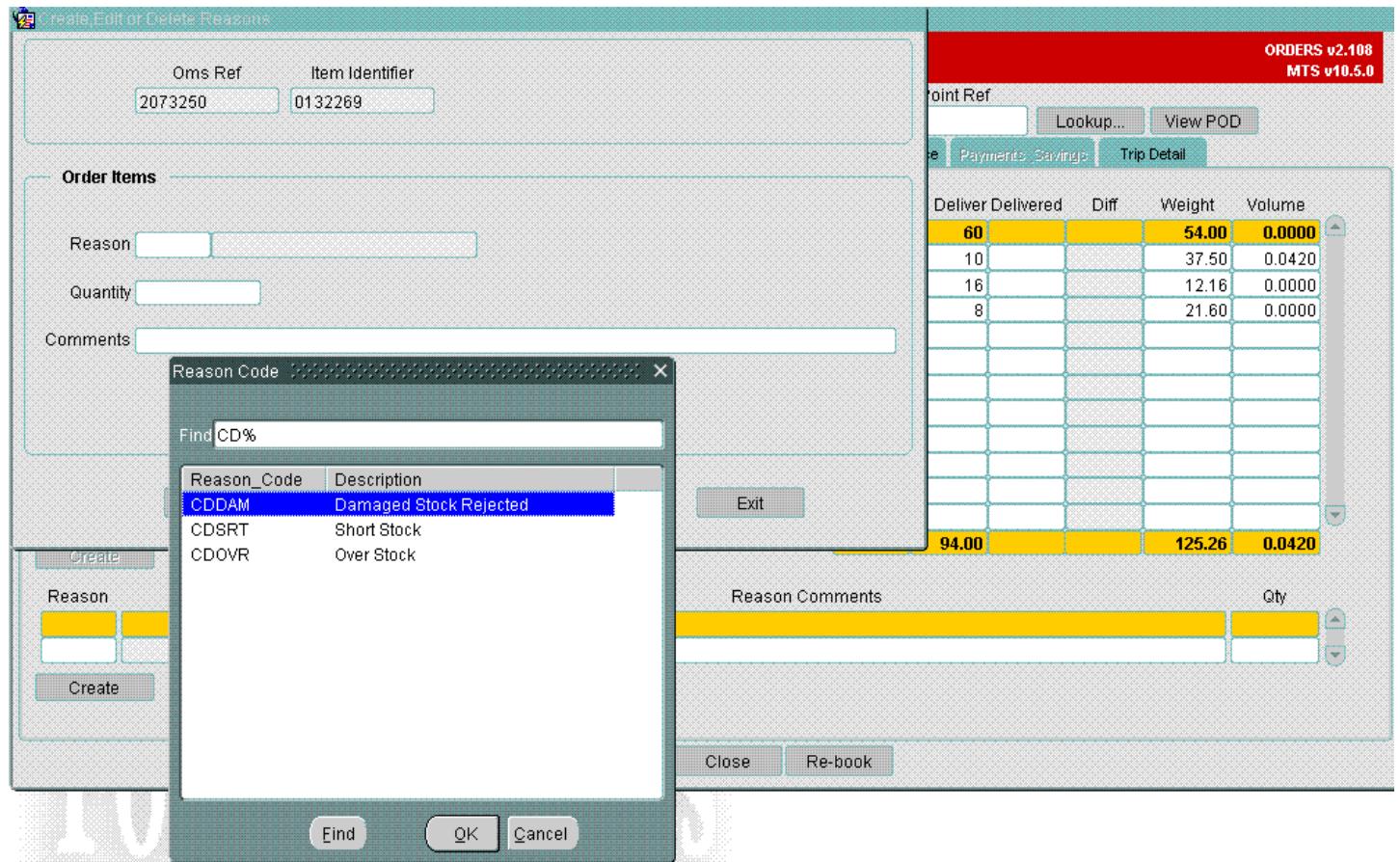
Status	Orns Ref	Booking Ref	Booked In	Customer Ref	Del Point Ref						
UN SCHEDULED	2073250	TE OUR ORD	<input checked="" type="checkbox"/>	SB00148938	2/280474	Lookup...	View POD				
Detail Order Items Add Detail MTM Info Audit Audit Archive Finance Non Conformance Payments Savings Trip Detail											
Cost Centre <input type="text" value="EXEL"/>		Customer <input type="text" value="RECKITTHEAL"/>		Schedule <input type="text" value="090424"/>							
Template ID <input type="text"/>		Group Name <input type="text" value="EXELBAWT"/>									
Collect From <input type="text" value="EXELBAWT"/>		Bawtry_Exel Bawtry_DN11 9HE									
Deliver To <input type="text" value="NUMAWREX"/>		Wrexham_Numark Trading Ltd_LL13 7TF				<input type="checkbox"/> Show Inactive locations					
Current Location <input type="text"/>				Temp Combo <input type="text"/>							
Collect times <input type="text" value="24/04/09"/> 15:59 to <input type="text" value="24/04/09"/> 23:59		Target <input type="text"/> <input type="text"/>		<input checked="" type="radio"/> Standard times <input type="radio"/> Collection Time Target <input type="radio"/> Delivery Time Target <input type="radio"/> Open Window							
Delivery times <input type="text" value="24/04/09"/> 23:54 to <input type="text" value="24/04/09"/> 23:59		Target <input type="text"/> <input type="text"/>									
Planned				Actual							
Product Type	DU Type	Qty	Weight	Volume	Cases	RPE	Despatched	Delivered	Weight	Volume	Special Flag
AMBIENT	CHEP PALLET	1.000	125.26	1.00000	94	1.00					
Original Date <input type="text"/> 1.000 125.26 1.00000 94 1.00 <input type="text"/> <input type="text"/>											
Special Instructions <input type="text"/>											
New Order View Info Save Close Re-book											



3.11.1 Item Reason Codes

Reason codes for non-conformance can be entered against each item line. A new set of reason codes will be setup for Item non-conformance, these will be labelled as ITEM_NON_CON.

The reason codes can be inserted via the XML Interface, or they can be entered manually from the order items tab.



The screenshot shows the 'Create/Edit/Delete Reasons' interface. On the left, there are fields for 'Oms Ref' (2073250) and 'Item Identifier' (0132269). A modal window titled 'Reason Code' is open, showing a list of reason codes with descriptions. The code 'CDDAM' is selected, with the description 'Damaged Stock Rejected'. At the bottom of the modal are buttons for 'Find', 'OK', and 'Cancel'. On the right, the 'ORDERS v2.108 MTS v10.5.0' interface is visible, showing a table of order items with columns for 'Deliver', 'Delivered', 'Diff', 'Weight', and 'Volume'. The total values are 94.00, 54.00, 0.0420, 125.26, and 0.0420 respectively. Below the table is a 'Reason Comments' section with a text input field and a 'Qty' field.

3.11.2 Changes To Rebook

The Re-book process will be changed to incorporate the item level information. When a Re-book takes place the item information will be transferred to the new booking in the same way as the line level information.

If an amendment file is sent in for an order that has been rebooked, the data on the new order will be amended.



4 References

Not Available



5 Glossary

Not Available



6 Document History

Version	Date	Status	Reason	Initials
0.1	12/03/09	Draft	Initial version	DNG
0.2	05/05/09	Draft	XML Changes Added	DRM
0.3	08/05/09	Draft	Reviewed	MJC
0.4	08/05/09	Draft	Fixes Following Review	DRM
0.5	27/05/09	Draft	Client Requested Changes	DRM
1.0	03/06/09	Issued	Reviewed and Issued	MJC



7 Authorised By

<i>Matt Crisford</i>	Development Manager
<i>Suk Sandhu</i>	TMSCC MTS Product Manager

