RTCIS Change ANAlysis

DATE: May 27, 2014

BY: Aaron Krause

CR: 1211 – RAI Next Generation

**System**: RTCIS

**Summary of Change:**

todo

**Hours:** xxx hours

**Change Analysis Revision History:**

|  |  |
| --- | --- |
| **Date of Revision** | **Description of Modification** |
| 5/27/2014 | Original |
| 6/17/2014 | Meeting with Cathy and Dan to discuss the preliminary interface |
|  | Define code requirements for splitting current RAI architecture from the RAI NG approach using the integrator. |
|  |  |

**Background:**

todo

**Requirements:**

***Requirement 1****: Modify the outbound RAI routines (aal routines)*

todo.

***Requirement 2****: Create an inbound RAI library (from “act” applications)*

todo.

***Requirement 3****: Separating function calls bi-directional data into multiple inbound and outbound transactions*

todo.

***Requirement 4****: Define RAI NG Interface definitions*

todo.

**Database Changes:**

*None*

**New System Parameters:**

*None.*

**New System Transactions:**

*None.*

**CRT/RDT Screen Changes:**

*None.*

**Report Changes:**

*None.*

**Logic Changes:**

*None.*

**Upgrade Script Requirements:**

*None.*

**ESI/Integrator Configuration Changes:**

*None.*

**Interface Changes:**

Comparison of Existing RAI messages and proposed RAI NG Transactions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***To/From*** | ***Existing RAI*** | ***RAI NG Transaction*** | ***Segments*** | ***Std*** |
| *RTCIS →ASRS*  *\* include A→R* | [Message 8](#Messsage_8) | [Induction (INDUCTION)](#_Induction_(INDUCTION)) | [MOVE\_REQ\_SEG](#_Segment_Tag:_MOVE_REQ_SEG_1) | Y |
|  |  |  | [INV\_SEG](#_Segment_Tag:_INV_SEG_1) | Y |
|  |  | [RTCIS RAI NG (New) – Deposit Location (DEP\_LOC)](#_RTCIS_RAI_NG_14) | [DEP\_LOC\_SEG](#_Segment_Tag:_DEP_LOC_SEG) | N |
|  |  | [2013.2 – M ovement confirm (MOVEMENT\_CONFIRM)](#_Movement_confirm_(MOVEMENT_CONFIRM)) | [MOVE\_CONF\_SEG](#_Segment_Tag:_MOVE_CONF_SEG_2) | Y |
| *RTCIS →ASRS*  *\* include A→R* | [Message 13](#Messsage_13) | [2013.2 - Movement request](#_2013.2_–_Movement) | [MOVE\_REQ\_SEG](#_Segment_Tag:_MOVE_REQ_SEG) | Y |
|  |  | [2013.2 – Movement cancel](#_2013.2_–_Movement_1) | [MOVE\_CAN\_SEG](#_Segment_Tag:_MOVE_CAN_SEG) | N |
|  |  | [RTCIS RAI NG (New) – Movement Location](#_RTCIS_RAI_NG) | [MOVE\_LOC\_SEG](#_Segment_Tag:_MOVE_LOC_SEG) | N |
|  |  | [2013.2 – Pick request](#_2013.2_–_Pick) | [PICK\_REQ\_SEG](#_Segment_Tag:_PICK_REQ_SEG) | Y |
|  |  | [2013.2 – Pick cancel](#_2013.2_–_Pick_1) | [PCK\_CAN\_SEG](#_Segment_Tag:_PCK_CAN_SEG) | Y |
|  |  | [RTCIS RAI NG (New) – Pick Location (PICK\_LOC)](#_2013.2_–_Movement_2) | [PICK\_LOC\_SEG](#_Segment_Tag:_PICK_LOC_SEG) | N |
| *RTCIS →ASRS* | [Message 16](#Messsage_16) | [2013.2 - Inventory attribute change (INVENTORY\_ATTR\_CHANGE)](#_2013.2_-_Inventory) | [INV\_SEG](#_Segment_Tag:_INV_SEG) | Y |
| *RTCIS →ASRS* | [Message 20](#Messsage_20) | [RTCIS RAI NG (New) – Cancel Shipment Staging (CAN\_SHIP\_STAGE)](#_RTCIS_RAI_NG_10) | [CAN\_SHIP\_STG\_SEG](#_Segment_Tag:_CAN_SHIP_STG_SEG) | N |
| *RTCIS →ASRS* | [Message 25](#Messsage_25) | [RTCIS RAI NG (New) – Shipment Complete (SHIP\_CMP)](#_RTCIS_RAI_NG_12) | [SHIP\_CMP\_SEG](#_Segment_Tag:_SHIP_CMP_SEG) | N |
| *RTCIS →ASRS* | [Message 26](#Messsage_26) | [RTCIS RAI NG (New) – Stop Shipment Staging (STOP\_SHIP\_STG)](#_RTCIS_RAI_NG_13) | [STOP\_SHIP\_STG\_SEG](#_Segment_Tag:_STOP_SHIP_STG_SEG_1) |  |
| *RTCIS →ASRS* | [Message 32](#Messsage_32) | TBD | TBD | TBD |
| *RTCIS →ASRS*  *\* include A→R* | [Message 35](#Messsage_35) | TBD | TBD | TBD |
| *RTCIS →ASRS* | [Message 40](#Messsage_40) | [RTCIS RAI NG (New) – Cancel Production Order Staging (CAN\_PRDORD\_STAGE)](#_RTCIS_RAI_NG_11) | [CAN\_PRDORD\_STG\_SEG](#_Segment_Tag:_CAN_PRDORD_STG_SEG) | N |
|  |  |  |  |  |
| *ASRS→RTCIS* | [Message 14](#Messsage_14) | [2013.2 – Movement confirm](#_2013.2_–_Movement_2) | [MOVE\_CONF\_SEG](#_Segment_Tag:_MOVE_CONF_SEG) | Y |
|  |  | [2013.2 – Movement error](#_2013.2_–_Movement_3) | [MOVE\_ERR\_SEG](#_Segment_Tag:_MOVE_ERR_SEG) | Y |
|  |  | [2013.2 – Pick confirm](#_2013.2_–_Pick_2) | [PICK\_CONF\_SEG](#_Segment_Tag:_PICK_CONF_SEG) | Y |
|  |  | [2013.2 – Pick error](#_2013.2_–_Pick_3) | [PICK\_ERR\_SEG](#_Segment_Tag:_PICK_ERR_SEG) | Y |
| *ASRS→RTCIS* | [Message 15](#Messsage_15) | [2013.2 – Movement confirm](#_2013.2_–_Movement_4) | [MOVE\_CONF\_SEG](#_Segment_Tag:_MOVE_CONF_SEG_1) | Y |
| *ASRS→RTCIS*  *\* include R→A* | [Message 21](#Messsage_21) | [RTCIS RAI NG (New) – Request Next Shipment](#_RTCIS_RAI_NG_1) | [REQ\_NEXT\_SHIP\_SEG](#_Segment_Tag:_REQ_NEXT_SHIP_SEG) | N |
|  |  | [RTCIS RAI NG (New) – Next Shipment for Staging](#_RTCIS_RAI_NG_2) | [NEXT\_SHIP\_STG\_SEG](#_Segment_Tag:_NEXT_SHIP_STG_SEG) | N |
|  |  |  | [NEXT\_UL\_SHIP\_STG\_SEG](#_Segment_Tag:_NEXT_UL_SHIP_STG_SEG) | N |
| *ASRS→RTCIS* | [Message 22](#Messsage_22) | [RTCIS RAI NG (New) – Start Shipment Staging (STRT\_SHIP\_STAGE)](#_RTCIS_RAI_NG_4) | [STRT\_SHIP\_STG\_SEG](#_Segment_Tag:_STRT_SHIP_STG_SEG) | N |
| *ASRS→RTCIS* | [Message 23](#Messsage_23) | [RTCIS RAI NG (New) – Stage confirm (STAGE\_CONFIRM)](#_RTCIS_RAI_NG_5) | [STAGE\_CONF\_SEG](#_Segment_Tag:_STAGE_CONF_SEG) | N |
| *ASRS→RTCIS* | [Message 24](#Messsage_24) | [RTCIS RAI NG (New) – Stop Shipment Staging (STOP\_SHIP\_STAGE)](#_RTCIS_RAI_NG_6) | [STOP\_SHIP\_STG\_SEG](#_Segment_Tag:_STOP_SHIP_STG_SEG) | N |
| *ASRS→RTCIS*  *\* include R→A* | [Message 41](#Messsage_41) | [RTCIS RAI NG (New) – Request Next Prod Order](#_RTCIS_RAI_NG_3) | [REQ\_NEXT\_PRDORD\_SEG](#_Segment_Tag:_REQ_NEXT_PRDORD_SEG) | N |
|  |  | [RTCIS RAI NG (New) – Next Prod Order Staging](#_RTCIS_RAI_NG_3) | [NEXT\_PRDORD\_STG\_SEG](#_Segment_Tag:_NEXT_PRDORD_STG_SEG) | N |
|  |  |  | [NEXT\_UL\_PRDORD\_STG\_SEG](#_Segment_Tag:_NEXT_UL_PRDORD_STG_SEG) | N |
| *ASRS→RTCIS* | [Message 42](#Messsage_42) | [RTCIS RAI NG (New) – Start Production Order Staging (STRT\_PRDORD\_STAGE)](#_RTCIS_RAI_NG_7) | [STRT\_PRODORD\_STG\_SEG](#_Segment_Tag:_STRT_PRODORD_STG_SEG) | N |
| *ASRS→RTCIS* | [Message 43](#Messsage_43) | [RTCIS RAI NG (New) – Stage confirm (STAGE\_CONFIRM)](#_RTCIS_RAI_NG_8) | [STAGE\_CONF\_SEG](#_Segment_Tag:_STAGE_CONF_SEG_1) | N |
| *ASRS→RTCIS* | [Message 44](#Messsage_44) | [RTCIS RAI NG (New) – Stop Production Order Staging (STOP\_PRDORD\_STAGE)](#_RTCIS_RAI_NG_9) | [STOP\_PRODORD\_STG\_SEG](#_Segment_Tag:_STOP_PRODORD_STG_SEG) | N |

**RTICIS to ASRS Messages**

*Note: Transaction from RTCIS to ASRS may include inline responses, in which the ASRS sends data back to RTCIS.*

***Message 8 – Assign ASRS Input Location***

***Description***

RTCIS uses the message to request an input location from the ASRS for a unit load. The ASRS responds in-line with the suggested input location.

***Analysis***

*Open Issue – Is this only called by the dtlmsgdrv? Answer: All induction through FPDS (meaning we will have a message 5).*

*Open issue – Need a better explanation of how RTCIS distinguishes between U8 and L8. Answer: Syspar? The levels are physically split (impossible path), C8 is for setups, to move them building to building for delivery to a door. Need to check the withdrawal logic – i.e. how do we get that specific pallet back? Only doing this may be krelshiem?*

*Existing RAI Interface Definition, to call function ACTIV\_assign\_input /* *aal\_assign\_input*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | A8 – Ask ASRS for input location. Occurs when delivery location = 0 in message 5. Two A8s are sent for Stacked pallets.  D8 – De-announce the Unit load to ASRS. Happens when unit load pending location is the ASRS. The ASRS then de-allocates resources for storing the specific unit load. Only one D8 is sent for stacked pallets.  M8 – Announce to ASRS which input location will arrive. When delivery location is not 0, 88, 99, consign type, or reject type location.  C8 – Request an input location for a case picked unit load. This is a unit load which has been created with many different item codes.  L8 – same as an A8, except it is telling the ASRS system that the ulid is on the lower FPDS, so the ASRS system will only return lower input points. Happens when message 5 delivery location = 88  U8 – same as an A8, except it is telling the ASRS system that the ulid is on the upper FPDS, so the ASRS system will only return upper input points. Happens when message 5 delivery location = 99 | A4 |
| Unit\_load\_id | Unit load Barcode including check digit | N20 |
| Brand\_Code | The item code for the unit load. | N8 |
| Brand\_Description | If this is not C8, the item description I used. If this is C8, this field contains the shipment number and a sequence number. The format is nnnnnnnnnnnn:s where “nnnnnnnnnnnn” is up to a twelve digit shipment number and “s” is a loading sequence number. See message 21 for a description of how this information is used for retrieving case picked unit loads. | A40 |
| Code\_date | The control group for the unit load | A12 |
| Pallet\_Type | This PLC pallet type (ULPALL.PLCPAL), corresponding to the RTCIS pallet type (ULPALL.ULPALL) of the unit load. Any character can be used to indicate pallet type, but it must be the same in the ASRS data base and in the RTCIS data base. Sample values are   * ACTIV - Q=CHEP and T=GMA. * MSX - U=CHEP, E=EURO, and W=WERO. | A2 |
| Ul\_hold\_status\_code | The unit loads’s Q/A status. If this is release or early release, RL will be passed. If not, the ap\_transl\_asrs\_qa() function will check if the  “Translate QA Status for ASRS (Use HQ QA Status)?” system parameter is set. If so, HQ (for Hold Quality) will be passed. If the system parameter is not set, the RTCIS Q/A status will be set. | A6 |
| Activ\_input\_location | When making the function call to the ASRS, this will be blank for message types A8, D8, C8, L8, and U8. For message type M8, this field will contain the number of the input location to which the unit load is manually delivered.  Note from code: For a message type M8, the activ input location should be set to the delivery code of message 5  This field is also a return value from the ASRS. It will indicate the input location to which the unit load should be delivered. If for any reason the ASRS cannot accept the unit load, then a value of 9 will be returned in this field. | A5 |
| User\_id | This is the tech Id initiating the request. | A20 |
| Message\_Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |
| Item\_group | Item group | A6 |
| Base\_ulid | When pallets are stacked for storage, this is the SSCC-18 number of the bottom unit load. A message A8 is sent for each unit load in the stack, with the base\_ulid value contained in each message. This allows the ASRS to know which unit loads are stacked with each other. | N20 |
| Case\_quantity | Number of cases on pallet. Format XXXXXXXXYYY with 3 implied decimal places. Untdtl.casqty  E.g. 00000001000 = 1 case. | N11 |
| Partial\_flag | Y – Unit Load is a partial  N – Unit Load is a full or setup/kit | A1 |

*RAI Next Generation Interface Definition*

## Induction (INDUCTION)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: MOVE\_REQ\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| LODNUM | 30 | N | Pallet LPN | [Unit\_load\_id](#aal_assign_input_Unit_load_id) |
| SRCLOC | 20 | N | Source location | Not used in RTCIS |
| DSTLOC | 20 | Y | Destination location | [Activ\_input\_location](#aal_assign_input_Activ_input_location) |
| LODHGT | 19 | Y | Load height | Not used in RTCIS |
| LODWGT | 19 | Y | Load weight | Not used in RTCIS |
| ASSET\_TYP | 30 | Y | Asset type | Not used in RTCIS |
| BUNDLED\_FLG | 1 | Y | Bundled flag | Not used in RTCIS |
| DISTRO\_PALOPN\_FLG | 1 | Y | Distribution pallet open flag | Not used in RTCIS |
| LOAD\_ATTR1\_FLG-LOAD\_ATTR5\_FLG | 1 | Y | Pallet attribute flag 1 though 5 | Not used in RTCIS |

#### Segment Tag: INV\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SUBNUM | 30 | Y | Sub-load number | Not used in RTCIS |
| DTLNUM | 30 | Y | Detail number | Not used in RTCIS |
| UNTQTY | 10 | Y | Quantity in eaches | [Case\_quantity](#aal_assign_input_Case_quantity) |
| PRTNUM | 50 | N | Part number | [Brand\_code](#aal_assign_input_Brand_Code) |
| PRT\_CLIENT\_ID | 32 | Y | Client part number | Not used in RTCIS |
| FTPCOD | 30 | Y | Footprint code | Not used in RTCIS |
| UNTCAS | 10 | Y | Units per case | Not used in RTCIS |
| UNTPAK | 10 | Y | Units per pack | Not used in RTCIS |
| LOTNUM | 25 | Y | Lot number | [Code\_date](#aal_assign_input_Code_date) |
| SUP\_LOTNUM | 25 | Y | Supplier lot number | Not used in RTCIS |
| REVLVL | 25 | Y | Revision level | Not used in RTCIS |
| ORGCOD | 25 | Y | Origin code | Not used in RTCIS |
| CATCH\_QTY | 10 | Y | Catch quantity | Not used in RTCIS |
| MANDTE | 14 | Y | Manufacturing date | Not used in RTCIS |
| EXPIRE\_DTE | 14 | Y | Expiration date | Not used in RTCIS |
| SUPNUM | 32 | Y | Supplier number | Not used in RTCIS |
| INVSTS | 4 | Y | Inventory status | [Ul\_hold\_status\_code](#aal_assign_input_Ul_hold_status_code) |
| CSTMS\_BOND\_FLG | 1 | Y | Customs bond flag | Not used in RTCIS |
| DTY\_STMP\_FLG | 1 | Y | Duty stamp flag | Not used in RTCIS |
| CNSG\_FLG | 1 | Y | Consignee flag | Not used in RTCIS |
| INV\_ATTR\_STR1-18 | 100 | Y | Inventory attribute 1 through 18 | [Base\_ulid](#aal_assign_input_Base_ulid),  [Item\_group](#aal_assign_input_Item_group),  [Brand\_description](#aal_assign_input_Brand_Description),  [Pallet\_type](#aal_assign_input_Pallet_Type) |
| INV\_ATTR\_INT1-5 | 10 | Y | Inventory attribute number 1 through 5 | Not used in RTCIS |
| INV\_ATTR\_FLT1-3 | 19 | Y | Inventory attribute decimal 1 through 3 | Not used in RTCIS |
| INV\_ATTR\_DTE1-2 | 14 | Y | Inventory attribute date 1 and 2 | Not used in RTCIS |

## *RTCIS RAI NG (New)* – Deposit Location (DEP\_LOC)

**Transmitted:** ASRS to RTCIS

## Segment Tag: DEP\_LOC\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| LODNUM | 30 | N | Load number | [Unit\_load\_id](#aal_assign_input_Unit_load_id) |
| DSTLOC | 20 | Y | Destination location | [Activ\_input\_location](#aal_assign_input_Activ_input_location) |

## 2013.2 - Movement confirm (MOVEMENT\_CONFIRM)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: MOVE\_CONF\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| LODNUM | 30 | N | Load number | [Unit\_load\_id](#aal_assign_input_Unit_load_id) |
| DSTLOC | 20 | Y | Destination location | [Activ\_input\_location](#aal_assign_input_Activ_input_location) |
| OVRLOC | 20 | Y | Override location | Not used in RTCIS |
| OVRREA | 10 | Y | Override reason | Not used in RTCIS |
| LOAD\_ATTR1 FLG | 1 | Y | Load attribute number 1 | Not used in RTCIS |
| LOAD\_ATTR2 FLG | 1 | Y | Load attribute number 2 | Not used in RTCIS |
| LOAD\_ATTR3 FLG | 1 | Y | Load attribute number 3 | Not used in RTCIS |
| LOAD\_ATTR4 FLG | 1 | Y | Load attribute number 4 | Not used in RTCIS |
| LOAD\_ATTR5 FLG | 1 | Y | Load attribute number 5 | Not used in RTCIS |

***Message 13 – Manual Output Request***

***Description***

This is a message sent from RTCIS to the ASRS requesting the ASRS retrieve inventory by item code or by unit load. This message will be triggered by RTCIS replenishment requests, when the needed inventory is in the ASRS, or entered by the user manually.

***Analysis***

The existing RTCIS RAI interface has a concept that the Prime 2013.2 Interface does not. In the existing RAI interface, the ASRS responds to the RTCIS function call by indicating the VTL destination/staging location for the request. This provides RTCIS a destination location that may be shown to the user prior to the delivery of the unit loads. This also indicates if the ASRS expects to fulfill the request. If it cannot, the VTL location is blank and RTCIS will attempt to fulfill the replenishment from a non-ASRS location.

*Open Issue: Need to monitor the queue in case the ASRS never responds with a location.*

*Does the user normally monitor the withdrawal display/request?*

To retain this functionality, two new transactions are defined below that was not originally included in the 2013.2 Interface.

*Existing RAI Interface Definition, to call function* *ACTIV\_UL\_output\_req/aal\_wd\_request*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A13 | A4 |
| Host\_control\_number | This number is assigned within RTCIS, generated by ap\_next\_host\_ctrl(). It consists of an M plus a 4 digit number. | A12 |
| Brand\_Code | Optional ([Brand\_code](#ACTIV_UL_output_req_Brand_Code) or [Unit\_load\_id](#ACTIV_UL_output_req_Unit_load_id) must be requested). The 5 or 8 digit item code (UNTDTL.ITMCOD) | N8 |
| Unit\_load\_id | Optional ([Brand\_code](#ACTIV_UL_output_req_Brand_Code) or [Unit\_load\_id](#ACTIV_UL_output_req_Unit_load_id) must be requested). Unit load barcode including check digit, if requesting a specific unit load.  *Note: A specific unit load may only be requested with the CRT Withdrawal Manager using the request by unit load screen. All other RTCIS functions will request by item code or item code and control group.* | N20 |
| Code\_date | Optional. The requested control group.  *Note: Only the manual withdrawal request (either RDT via F23 or CRT Withdrawal Manager) will specify the control date. Normal RTCIS replenishments will not specify a specific control group.* | A12 |
| Pallet\_Type | This PLC pallet type (ULPALL.PLCPAL), corresponding to the RTCIS pallet type (ULPALL.ULPALL) requested. Any character can be used to indicate pallet type, but it must be the same in the ASRS data base and in the RTCIS data base. Sample values are   * ACTIV - Q=CHEP and T=GMA. * MSX - U=CHEP, E=EURO, and W=WERO. | A2 |
| Ul\_withdrawal\_qty | Number of Unit Loads to Withdrawal | A4 |
| Activ\_output\_location | **This field is also returned by the ASRS.** This field is the returned/requested delivery location for the withdrawal request. Note that the location passed/received will remove the VTL prefix, as determined by the “Prefix for ACTIV VTL locations” system parameter.  RTCIS may initially pass this field to the ASRS, to request a delivery location. If the “ASRS: Send VTL Location for Message 13” is set and the associated VTL location (ZONCOD.VTL\_OUTFEED\_LOCATN) is found, RTCIS will request this location. Otherwise, RTCIS will not pass a value, allowing the ASRS to select the destination location.    The ASRS will return value indicating the delivery location.   * If a request cannot be fulfilled, the ASRS will return a blank location. If the request if for a replenishment, RTCIS will attempt to get the replenishment from a non-ASRS location. Manual requests will remain in the queue until cancelled. * If the RTCIS requested location was blank, the ASRS returned location will be used. * If the RTCIS requested location was not blank, the ASRS location will be used regardless. *Note: There is no error checking to validate that the returned location* | A5 |
| withdrawal\_intent\_code | ‘N’ indicates that this message is a new request.  ‘C’ to cancel a previous withdraw request. | A2 |
| withdrawal\_select\_flag | Optional. The requested Q/A status. If this is release or early release, RL will be passed. If not, the ap\_transl\_asrs\_qa() function will check if the  “Translate QA Status for ASRS (Use HQ QA Status)?” system parameter is set. If so, HQ (for Hold Quality) will be passed. If the system parameter is not set, the RTCIS Q/A status will be set.  *Note: This seems to indicate the original Retrotech interface used just RL and HQ, but that other ASRS vendors have the ability to use RTCIS Q/A statuses.* | A2 |
| withdrawal\_output\_time | **This field is returned by the ASRS.** Estimate in minutes by the ASRS software as to when the pallet will actually be delivered to the output location. | A6 |
| User\_id | This is the tech Id initiating the request. | A20 |
| Message\_Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |
| Withdrawal\_partial\_code | Indicates if the request is for full or partial pallets. The possible values for this code are:  “1” - Only Full Pallet(s)  “2” - Only Partial(s)  “3” - Prefer Full Pallet(s), then Partial(s)  “4” - Prefer Partial(s), then Full Pallet(s)  RTCIS will check the “Store Partial Pallets in ASRS?” system parameter, to determine if partials are being stored in the ASRS.   * If this is a manual request and partials are being stored in the ASRS, RTCIS will prompt the user to choose from the options above. * If this is a manual request and parts are not being stored in the ASRS, the code will be 1 (Full only). * If this is an automatic request and partials are not being store in the ASRS, the code will be set to 3 (Full, then Part), to request full, then partials. *Note: This would seem to be equivalent to 1 (Full only), since we never expect a partial in the ASRS.* * If this is an automatic request and partials are allowed and RTCIS is requesting a replenishment for a layer case pick location, the code will be set to 1 (Full only) * If this is an automatic request and partials are allowed and RTCIS is requesting a replenishment for non-layer case pick, the code will be set to 4 (Part, then full) * If this is an automatic request and partials are allowed and the request is not for a case pick face, the code will be blank. *Note: This doesn’t seem to be correct, but the logic in db\_create\_rep() beginning on line 1067 leaves the rptopt blank in this situation.* | N1 |

*RAI Next Generation Interface Definition*

The ***Warehouse Control System Standard Interface - Release 2013.2*** splits the automation requests for unit loads and requests for items into two different transactions. The 2013.2 Interface also splits the initial request and the cancellation request. The ASRS responses are further split, having both a confirmation and error transaction, for each request type (by unit load and by item code).

Requests by unit load are made using the Movement Request Transaction. Cancellation of the request is made using the Movement Cancel Transaction. The ASRS will respond to the initial request with either a Movement Confirmation or a Movement Error transaction.

Requests by item (or item/control group) are made using the Pick Request Transaction. Cancellation of the request is made using the Pick Cancel Transaction. The ASRS will respond to the initial request with either a Pick Confirmation or a Pick Error transaction.

The RTCIS outbound transactions developed for the RAI Next Generation Interface will have to determine which of these four transactions to transmit.

As noted in the analysis above, in the existing RAI interface, the ASRS responds to the RTCIS function call by indicating the VTL destination/staging location for the request. This is passed back in the Activ\_output\_location field when the ACTIV\_UL\_output\_req function is called. To retain this functionality, two new transactions are defined below that were not originally included in the 2013.2 Interface. *Open Issue: Talk to Bartman about adding these.*

## 2013.2 – Movement request (MOVEMENT\_REQUEST)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: MOVE\_REQ\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| LODNUM | 30 | N | Pallet LPN | [Unit\_load\_id](#ACTIV_UL_output_req_Unit_load_id) |
| SRCLOC | 20 | N | Source location | “ASRS” |
| DSTLOC | 20 | Y | Destination location | [Activ\_output\_location](#ACTIV_UL_output_req_Activ_output_locatio) |

## 2013.2 – Movement cancel (MOVE\_CANCEL)

**Transmitted:** RTCIS to ASRS

*Open Issue – This was not included in the 2013.2 Interface. However, this seems to be an oversight rather than a functional different. Ask Bartman about adding it.*

#### Segment Tag: MOVE\_CAN\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| LODNUM | 30 | N | Pallet LPN | [Unit\_load\_id](#ACTIV_UL_output_req_Unit_load_id) |
| CANCOD | 40 | Y | Cancel code | Always “CANCEL” |

## *RTCIS RAI NG (New)* – Movement Location (MOVEMENT\_LOC)

**Transmitted:** ASRS to RTCIS

## Segment Tag: MOVE\_LOC\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| LODNUM | 30 | N | Load number | [Unit\_load\_id](#ACTIV_UL_output_req_Unit_load_id) |
| DSTLOC | 20 | Y | Destination location | [Activ\_output\_location](#ACTIV_UL_output_req_Activ_output_locatio) |
| DEL\_MINUTES | 6 | Y | Estimate in minutes by the ASRS software as to when the pallet will actually be delivered to the output location. | [withdrawal\_output\_time](#ACTIV_UL_output_req_withdrawal_output_ti) |

## 2013.2 – Pick request (PICK\_REQUEST)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: PICK\_REQ\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#ACTIV_UL_output_req_Host_control_number) |
| WRKTYP | 1 | Y | Work type | Always “W” |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_LINE\_ID | 10 | Y | Shipment line ID | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| CLIENT\_ID | 32 | Y | Client ID | Not used in RTCIS |
| ORDLIN | 10 | Y | Order line | Not used in RTCIS |
| ORDSLN | 10 | Y | Order sub-line | Not used in RTCIS |
| WKONUM | 20 | Y | Work order number | Not used in RTCIS |
| WKOREV | 10 | Y | Work order revision | Not used in RTCIS |
| WKOLIN | 10 | Y | Work order line | Not used in RTCIS |
| SRCLOC | 20 | Y | Source location | Always “ASRS” |
| PRTNUM | 50 | Y | Part number | [Brand\_Code](#ACTIV_UL_output_req_Brand_Code) |
| PCKQTY | 10 | Y | Pick quantity in eaches | [Ul\_withdrawal\_qty](#ACTIV_UL_output_req_Ul_withdrawal_qty) |
| PCK\_UOM | 2 | Y | Pick unit of measure | Not used in RTCIS |
| UOMQTY | 10 | Y | Unit of measure quantity | Not used in RTCIS |
| DSTLOC | 20 | Y | Destination location | [Activ\_output\_location](#ACTIV_UL_output_req_Activ_output_locatio) |
| ASSET\_TYP | 30 | Y | Asset type | Not used in RTCIS |
| EXPIRE\_DTE | 14 | Y | Expiration date | Not used in RTCIS |
| FTPCOD | 30 | Y | Footprint code | Not used in RTCIS |
| LOTNUM | 25 | Y | Lot number | [Code\_date](#ACTIV_UL_output_req_Brand_Code) |
| MANDTE | 14 | Y | Manufacture date | Not used in RTCIS |
| ORGCOD | 25 | Y | Origin code | Not used in RTCIS |
| PRT\_CLIENT\_ID | 32 | Y | Client part number | Not used in RTCIS |
| REVLVL | 25 | Y | Revision level | Not used in RTCIS |
| UNTCAS | 10 | Y | Units per case | Not used in RTCIS |
| UNTPAK | 10 | Y | Units per pack | Not used in RTCIS |
| SUP\_LOTNUM | 25 | Y | Supplier lot number | Not used in RTCIS |
| INV\_ATTR\_STR1-18 | 100 | Y | Inventory attribute 1 through 18 | [Pallet\_Type](#ACTIV_UL_output_req_Pallet_Type)  [withdrawal\_select\_flag](#ACTIV_UL_output_req_withdrawal_select_fl)  *Open Issue – Need to ask Bartman how these were intended to be used.* |
| INV\_ATTR\_INT1-5 | 10 | Y | Inventory attribute number 1 through 5 | [Withdrawal\_partial\_code](#ACTIV_UL_output_req_Withdrawal_partial_c) |
| INV\_ATTR\_FLT1-3 | 19 | Y | Inventory attribute decimal 1 through 3 | Not used in RTCIS |
| INV\_ATTR\_DTE1-2 | 14 | Y | Inventory attribute date 1 and 2 | Not used in RTCIS |

## 2013.2 – Pick cancel (PICK\_CANCEL)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: PCK\_CAN\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#ACTIV_UL_output_req_Host_control_number) |
| CANCOD | 40 | Y | Cancel code | Always “CANCEL” |

## RTCIS RAI NG (*New*) – Pick Location (PICK\_LOC)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: PICK\_LOC\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#ACTIV_UL_output_req_Host_control_number) |
| DSTLOC | 20 | Y | Destination location | [Activ\_output\_location](#ACTIV_UL_output_req_Activ_output_locatio) |
| DEL\_MINUTES | 6 | Y | Estimate in minutes by the ASRS software as to when the pallet will actually be delivered to the output location. | [withdrawal\_output\_time](#ACTIV_UL_output_req_withdrawal_output_ti) |

***Message 16 – Unit Load Quality Status Change***

***Description***

RTCIS sends this message to notify the ASRS status of a unit load has changed. This message will be sent for every unit load associated with the control group changed.

***Analysis***

RTCIS applications send alerts to asrsqamsg. Asrsqamsg calls db\_\_prc\_asrs\_qastat\_msg() which calls aal\_ul\_status\_change(). *Open Issue: Why is this done with alerts?*

*Existing RAI Interface Definition, to call function ACTIV\_UL\_status\_change/aal\_ul\_status\_change*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A16 | A4 |
| Unit\_load\_id | Unit load Barcode including check digit. This is the SSCC-18 number of the specific unit load whose status is to be changed. | N20 |
| Code\_date | The control group. If there are multiple control groups on the unit load, RTCIS will only notify the ASRS of the oldest control group.  *Open Issue: Why isn’t the item code also passed?*  *Open Issue: Do we ever have setups in the ASRS (or any other unit load with multiple items)?* | A12 |
| Ul\_hold\_status\_code | This is the new status of the specific unit load. . If this is release or early release, RL will be passed. If not, the ap\_transl\_asrs\_qa() function will check if the  “Translate QA Status for ASRS (Use HQ QA Status)?” system parameter is set. If so, HQ (for Hold Quality) will be passed. If the system parameter is not set, the RTCIS Q/A status will be set. | A6 |
| User\_id | Always <ASRS> | A20 |
| Message\_Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |

*RAI Next Generation Interface Definition*

#### 2013.2 - Inventory attribute change (INVENTORY\_ATTR\_CHANGE)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: INV\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| STOLOC | 25 | Y | Storage location | Not used in RTCIS |
| LODNUM | 25 | Y | Pallet LPN | [Unit\_load\_id](#aal_ul_status_change_Unit_load_id) |
| SUBNUM | 30 | Y | Subload number | Not used in RTCIS |
| DTLNUM | 30 | Y | Detail number | Not used in RTCIS |
| UNTQTY | 10 | Y | Quantity in eaches | Not used in RTCIS |
| TO\_PRTNUM | 50 | N | To part number | Item Code |
| TO\_PRT\_CLIENT\_ID | 32 | Y | To client part number | Not used in RTCIS |
| TO\_FTPCOD | 30 | Y | To footprint code | Not used in RTCIS |
| TO\_UNTCAS | 10 | Y | To units per case | Not used in RTCIS |
| TO\_UNTPAK | 10 | Y | To units per pack | Not used in RTCIS |
| TO\_LOTNUM | 25 | Y | To lot number | [Code\_date](#aal_ul_status_change_Code_date) |
| TO\_SUP\_LOTNUM | 25 | Y | To supplier lot number | Not used in RTCIS |
| TO\_REVLVL | 25 | Y | To revision level | Not used in RTCIS |
| TO\_ORGCOD | 25 | Y | To origin code | Not used in RTCIS |
| TO\_CATCH\_QTY | 10 | Y | To catch quantity | Not used in RTCIS |
| TO\_MANDTE | 14 | Y | To manufacturing date | Not used in RTCIS |
| TO\_EXPIRE\_DTE | 14 | Y | To expiration date | Not used in RTCIS |
| TO\_SUPNUM | 32 | Y | To supplier number | Not used in RTCIS |
| TO\_INVSTS | 4 | Y | To inventory status | [Ul\_hold\_status\_code](#aal_ul_status_change_Ul_hold_status_code) |
| TO\_CSTMS\_BOND\_FLG | 1 | Y | To customs bond flag | Not used in RTCIS |
| TO\_DTY\_STMP\_FLG | 1 | Y | To duty stamp flag | Not used in RTCIS |
| TO\_CNSG\_FLG | 1 | Y | To consignee flag | Not used in RTCIS |
| TO\_INV\_ATTR\_STR1-18 | 100 | Y | To inventory attribute 1 through 18 | Not used in RTCIS |
| TO\_INV\_ATTR\_INT1-5 | 10 | Y | To inventory attribute number 1 through 5 | Not used in RTCIS |
| TO\_INV\_ATTR\_FLT1-3 | 19 | Y | To inventory attribute decimal 1 through 3 | Not used in RTCIS |
| TO\_INV\_ATTR\_DTE1-2 | 14 | Y | To inventory attribute date 1 and 2 | Not used in RTCIS |

***Message 20 – Order Cancel Notification***

***Description***

This is message is sent from RTCIS to the ASRS to notify the ASRS that a shipment has been cancelled. The ASRS should stop staging unit loads.

If any unit loads have been physically staged, the ASRS should send a [message 24](#Messsage_24) to indicate that staging is complete (unless the [message 24](#Messsage_24) has already been sent). *Open issue: why do we need this back?*

***Analysis***

The P&G states order, but it is really shipment.

*Open issue: Why isn’t aal\_cancel\_order (potentially) called from either db\_\_delete\_order or db\_\_shipment\_order? Answer: the maintenance screens prevent removal/deletion if the order/shipment is in-progress in the ASRS.*

*Existing RAI Interface Definition, to call function ACTIV\_cancel\_order/aal\_cancel\_order*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A20 | A4 |
| Host\_control\_number | This is the [host control number](#actgetord_Host_control_number) supplied in [Message 21](#Messsage_21). | A12 |
| User\_id | This is the tech Id initiating the request. | A20 |
| Message\_Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Cancel Shipment Staging (CAN\_SHIP\_STAGE)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: CAN\_SHIP\_STG\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#aal_cancel_order_Host_control_number) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |

***Message 25 – Ship Lane Empty***

***Description***

RTCIS sends this message to indicate the last unit load has been picked up from the staging location/spur. Note: The P&G Interface states that this only applies to London with the MSX system.

***Analysis***

db\_pickup\_ul() potentially calls this when a unit load is picked up from a staging location.

*Open Issue: Why is the Activ call in db\_send\_empty\_index.ppc, rather than an aal\_ routine in applib?*

*Open Issue: Cathy had the comment that this is not needed in Prime. Why?*

*Open Issue: How does this work with Activ? Is Retrotech able to detect this via the automation?*

*Existing RAI Interface Definition, to call function ACTIV\_complete\_order / db\_send\_empty\_index*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A25 | A4 |
| Host\_control\_number | This is the [host control number](#actgetord_Host_control_number) supplied in [Message 21](#Messsage_21). | A12 |
| Unit\_load\_id | Always spaces | N20 |
| Activ\_output\_location | This is the staging lane that is empty | A5 |
| Activ\_level\_id | Always spaces | A2 |
| Pallet\_type\_code | Always spaces | A2 |
| Brand\_Code | Always spaces | N8 |
| Code\_date | Always spaces | A12 |
| Line\_item\_sequence\_number | Always spaces | N4 |
| User\_id | This is the tech Id initiating the request. | A20 |
| Message\_Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Shipment Complete (SHIP\_CMP)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: SHIP\_CMP\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | N | Work reference | [Host\_control\_number](#ACTIV_complete_order_Host_control_number) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| DSTLOC | 20 | N | Staging Lane | [Activ\_output\_location](#ACTIV_complete_order_Activ_output_locati) |

***Message 26 – Stop Staging Pallets***

***Description***

RTCIS sends this message to notify the ASRS to stop staging the shipment if the associated trailer has been moved from the door or if the tech signs onto the shipment and halts the ASRS staging process.

***Analysis***

*Open Issue: The intent of this message is to inform the ASRS to stop staging if the trailer is moved from the door. However, I don’t see how/where this message will be sent if the trailer is moved. And why do we call this routine vehicle arrival?*

*Existing RAI Interface Definition, to call function ACTIV\_vehicle\_arrival/* *aal\_vehicle\_arrival*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A26 | A4 |
| Host\_control\_number | This is the [host control number](#actgetord_Host_control_number) supplied in [Message 21](#Messsage_21). | A12 |
| User\_id | This is the tech Id initiating the request. | A20 |
| Message\_Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Stop Shipment Staging (STOP\_SHIP\_STG)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: STOP\_SHIP\_STG\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | N | Work reference | [Host\_control\_number](#aal_vehicle_arrival_Host_control_number) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |

***Message 32 – Slot Sign On/Off***

***Description***

*Open Issue – Need a better understanding on the Activ slots*

***Analysis***

Todo

*Existing RAI Interface Definition, to call function ACTIV\_UL\_output\_req/aal\_wd\_request*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | A32 – sent when a user signs on to load a shipment which has been staged in an ASRS output slot or conveyor. The user can also manually sign on to a staging slot or conveyor from the RDT.  D32 – sent when a user signs off the shipment loading or manually signs off the slot.  U32 – is used to tell ACTIV to de-stage a cancelled order. | A4 |
| Host\_control\_number | This is the host control number supplied in msg 21. It is included in the A32 message but not the D32 or U32 message. | A12 |
| Activ\_output\_location | This is the output slot or conveyor location which is being signed on to, or the location of the order to de-stage. | A5 |
| Busy\_slot | Spaces – Not Used | A5 |
| Slot\_type | Spaces – Not Used | A2 |
| Previous\_state | Spaces – Not Used | A4 |
| Current\_state | Spaces – Not Used | A4 |
| User\_id | This is the tech Id initiating the request. | A20 |
| Message\_Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |

*RAI Next Generation Interface Definition*

TODO

***Message 35 – Request ASRS FPDS Input Conveyor for Inbound Trailer***

***Description***

Todo

***Analysis***

Todo

*Existing RAI Interface Definition, to call function ACTIV\_UL\_output\_req/aal\_wd\_request*

|  |  |  |  |
| --- | --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** | |
| Message\_type | A35 – Ask ASRS for Input Conveyor  D35 – De-announce to ASRS the trailer’s arrival  M35 - Announce to ASRS which FPDS this trailer will arrive on | A4 | |
| Trailer\_number | The unique trailer identifier for a truck line (TRAILER.TRLNUM) | A10 | |
| Truck\_line | The carrier code ie ‘SCNN’ (TRAILER.TRKLIN) | A10 | |
| User\_id | This is the tech Id initiating the request. | A20 | |
| Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 | |
| Activ\_input\_conveyor | The conveyor ASRS picked for an A35. The conveyor RTCIS announced for a M35. ‘FPDS1’, ‘FPDS2’ etc. | A6 | |
| Line\_count | Number of Unit loads on this truck | N8 | |
| ***Line Item Details – repeated for each unit load for A35 and M35*** | | | |
| Unit\_load\_id | Unit load Barcode including check digit | | N20 |
| Brand\_Code | The 5 or 8 digit Product Identifier (UNTDTL.ITMCOD) | | N8 |
| Item\_Number | * ACTIV - ‘1’ in the first character position means Feeder Stock | | A16 |
| Pallet\_Type | This is a one character indicator of the pallet.   * ACTIV - Q=CHEP and T=GMA. * MSX - U=CHEP, B=EURO, and W=WERO. * Any character can be used to indicate pallet type, but it must be the same in the ASRS data base and in the RTCIS data base. (ULPALL.PLCPAL) | | A2 |

*RAI Next Generation Interface Definition*

***Message 40 – Customization Order Cancelled***

***Description***

This is message is sent from RTCIS to the ASRS to notify the ASRS that a production order has been cancelled. The ASRS should stop staging unit loads.

*Open Issue: Is the ASRS expected to send a* [*message 44*](#Messsage_44)*, like the* [*message 20*](#Messsage_20) *is followed by a* [*message 24*](#Messsage_24)*?*

***Analysis***

db\_upd\_prdrls\_cancel() calls *aal\_cancel\_cust\_order()*

*Existing RAI Interface Definition, to call function ACTIV\_cancel\_cust\_order/* *aal\_cancel\_cust\_order*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A40 | A4 |
| Host\_control\_number | This is the host control number supplied in msg 41 | A12 |
| User\_id | This is the tech Id initiating the request. | A20 |
| Message\_Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Cancel Production Order Staging (CAN\_PRDORD\_STAGE)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: CAN\_PRDORD\_STG\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#aal_cancel_cust_order_Host_control_numbe) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |

**ASRS to RTICIS Messages**

*Note: Transaction from the ASRS to RTCIS may include inline responses, in which the RTCIS sends data back to the ASRS.*

***Message 14 – Unit Load Arrival at Output Point***

***Description***

This message is sent from the ASRS to RTCIS to indicate inventory requested from RTCIS via [***Message 13***](#Messsage_13)has been delivered to an output location/spur.

***Analysis***

One message in the existing RAI interface will be translate into four 2013.2 Interface transactions in the RAI NG interface. RTCIS will have to differentiate between requests by item code and requests by unit load. RTCIS will also have to process different transactions for success and short/errors. Beyond that, the 2013.2 transactions may be used, as shown in the mappings below, without adding any additional segments.

*Existing RAI Interface Definition, to call to db\_\_stage\_asrs\_ul() from actularrvl*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | A14 – sent by the ASRS whenever a pallet requested via msg 13 has been delivered to an output location.  D14 – sent by the ASRS if a portion or all of a manual withdraw request cannot be delivered. | A4 |
| Host\_control\_number | Matches the [Host\_control\_number](#ACTIV_UL_output_req_Host_control_number) sent in the corresponding [Message 13](#Messsage_13). | A12 |
| Activ\_output\_location | This is the output location/spur where the ASRS delivered the Unit Load. This may (or may not) match the requested location specified in the [Activ\_output\_location](#ACTIV_UL_output_req_Activ_output_locatio) in the corresponding [Message 13](#Messsage_13). | A5 |
| Activ\_level\_id | Not used by RTCIS (only logged) | A2 |
| Unit\_load\_id | Unit load barcode including check digit. This must match if a specific [Unit\_load\_id](#ACTIV_UL_output_req_Unit_load_id) was sent in the corresponding [Message 13](#Messsage_13). If the request was by [Brand\_code](#ACTIV_UL_output_req_Brand_Code), any unit load for the item may be delivered. | N20 |
| Pallet\_Type | Not used by RTCIS (only logged). RTCIS will use the pallet type associated with the unit load in the RTCIS database, regardless of the pallet type passed by the ASRS. | A2 |
| Brand\_Code | Not used by RTCIS (only logged). RTCIS will use the item class and item code associated with the unit load in the RTCIS database, regardless of the brand code passed by the ASRS. | N8 |
| Code\_date | Not used by RTCIS (only logged). RTCIS will use the control group associated with the unit load in the RTCIS database, regardless of the control group passed by the ASRS. | A12 |
| withdrawal\_output\_status | The status of the request from the ASRS.   * Success – 0 (RAI\_OK) or an error code. * Cancelled – -106 (RAI\_UL\_CANCELLED). *Open Issue: P&G’s interface doc indicates this message is only in response to an A13C. Can we get -106 for any other message? (i.e. a request when RTCIS did not initiate the cancellation?)* * Short Quantity – > 0. If the [Message\_type](#actularrvl_Message_type) is D14, this field will contain the short quantity. * Any other status – < 0. Unknown error. RTCIS cancels undelivered portion the request | A2 |
| User\_id | ASRS user/application name. Not used by RTCIS (only logged) | A20 |
| Message\_Timestamp | ASRS timestamp in – YYYYMMDDHHMMSSss format. Not used by RTCIS (only logged) | D16 |

*RAI Next Generation Interface Definition*

The ***Warehouse Control System Standard Interface - Release 2013.2*** splits the automation requests for unit loads and requests for items into two different transactions. The ASRS responses are further split, having both a confirmation and error transaction, for each request type (by unit load and by item code).

Requests by unit load are made using the Movement Request Transaction. The ASRS will respond with either a Movement Confirmation or a Movement Error transaction. Requests by item are made using the Pick Request transaction. The ASRS will respond with either a Pick Confirm Transaction or a Pick Error transaction.

The RTCIS outbound transactions developed for the RAI Next Generation Interface will have to determine which transaction to send. Four new corresponding inbound transactions will have to be developed, all four of which will confirm an entry in the RTCIS Withdrawal Request table (WDREQS).

## 2013.2 – Movement confirm (MOVEMENT\_CONFIRM)

**Transmitted:** ASRS to RTCIS

## Segment Tag: MOVE\_CONF\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| LODNUM | 30 | N | Load number | [Unit\_load\_id](#actularrvl_Unit_load_id) |
| DSTLOC | 20 | Y | Destination location | [Activ\_output\_location](#actularrvl_Activ_output_location) |
| OVRLOC | 20 | Y | Override location | Not used in RTCIS |
| OVRREA | 10 | Y | Override reason | Not used in RTCIS |
| LOAD\_ATTR1 FLG | 1 | Y | Load attribute number 1 | Not used in RTCIS |
| LOAD\_ATTR2 FLG | 1 | Y | Load attribute number 2 | Not used in RTCIS |
| LOAD\_ATTR3 FLG | 1 | Y | Load attribute number 3 | Not used in RTCIS |
| LOAD\_ATTR4 FLG | 1 | Y | Load attribute number 4 | Not used in RTCIS |
| LOAD\_ATTR5 FLG | 1 | Y | Load attribute number 5 | Not used in RTCIS |

## 2013.2 – Movement error (MOVEMENT\_ERROR)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: MOVE\_ERR\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| LODNUM | 30 | N | Pallet LPN | [Unit\_load\_id](#actularrvl_Unit_load_id) |
| DSTLOC | 20 | Y | Current pallet location | [Activ\_output\_location](#actularrvl_Activ_output_location) |
| STATUS | 10 | N | Current movement request status | Always “ERR”  *Open Issue – Should we allow a CSI type of error status to be returned?* |
| ERROR\_DESCR | 255 | N | Exception message | Not used in RTCIS |

## 2013.2 – Pick confirm (PICK\_CONFIRM)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: PICK\_CONF\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#actularrvl_Host_control_number) |
| LODNUM | 30 | N | Pallet LPN | [Unit\_load\_id](#actularrvl_Unit_load_id) |
| DSTLOC | 20 | Y | Physical pallet location | [Activ\_output\_location](#actularrvl_Activ_output_location) |

## 2013.2 – Pick error (PICK\_ERROR)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: PICK\_ERR\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#ACTIV_UL_output_req_Host_control_number) |
| CANCOD | 40 | Y | Pallet LPN | Always “CANCEL” |
| ERROR\_DESCR | 255 | Y | Physical pallet location |  |
| *Open Issue: The Prime 2013.2 interface does not have a method to report if it can only fulfill part of a request. RAI does this today when the ASRS sends a D14 to RTCIS, with the withdrawal\_output\_status field indicating the short quantity. I see two options: Add an extra field to this transaction or have the ASRS wait to notify RTCIS until it has delivered all ULs that it can.* | TBD | Y | Short Quantity | [withdrawal\_output\_status](#actularrvl_withdrawal_output_status) |

***Message 15 – Unit Load Removed from Output***

***Description***

This is a message sent from the ASRS to RTCIS and indicates that a pallet which had been staged for a shipment ([Message 21](#Messsage_21)) or production order ([Message 41](#Messsage_41)) has been removed from the output location. The message structure is the same as [Message 14](#Messsage_14).

*Open Issue: Code has comment “This purpose of this function is to provide a means of automated testing, by simulating the truck loading process”. Should we continue to support this?*

***Analysis***

The P&G Interface document states that this will work with [Message 13](#Messsage_13), [Message 21](#Messsage_21), or [Message 41](#Messsage_41). However, I doubt this can work with [Message 13](#Messsage_13). The host control number must be a shipment Id for this function to work and a withdrawal request will never have a shipment.

*Open Issue: This looks like kind of a dangerous function. For example, it depends on shipid being passed in the host\_control\_number, but it never really checks to see if the ordnum associated with the UL is on this shipid. If I am reading this correctly, we could signon to one shipment and actually be loading for another. If we continue to use this function, I would suggest looking up the shipid based on the UL’s ordnum and ignore the shipid passed in. Do you agree?*

*And, it just assumes that the UL was loaded onto the trailer, when it could have actually been just moved to another staging location (i.e. removed from the spur and placed in a traditional staging location). I am glad this is just used for testing.*

*Existing RAI Interface Definition, to call to load\_truck() from actlocchg*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A15 | A4 |
| Host\_control\_number | Matches the [Host\_control\_number](#ACTIV_UL_output_req_Host_control_number) sent in the corresponding [Message 21](#Messsage_21) or [Message 41](#Messsage_41). | A12 |
| Activ\_output\_location | Not used by RTCIS (only logged). RTCIS will use the last known location associated with the unit load in the RTCIS database, regardless of the location passed by the ASRS | A5 |
| Activ\_level\_id | Not used by RTCIS (only logged) | A2 |
| Unit\_load\_id | Unit load barcode including check digit. This must match if a specific [Unit\_load\_id](#ACTIV_UL_output_req_Unit_load_id) was sent in the corresponding [Message 13](#Messsage_13). If the request was by [Brand\_code](#ACTIV_UL_output_req_Brand_Code), any unit load for the item may be delivered. | N20 |
| Pallet\_Type | Not used by RTCIS (only logged). RTCIS will use the pallet type associated with the unit load in the RTCIS database, regardless of the pallet type passed by the ASRS. | A2 |
| Brand\_Code | Not used by RTCIS (only logged). RTCIS will use the item class and item code associated with the unit load in the RTCIS database, regardless of the brand code passed by the ASRS. | N8 |
| Code\_date | Not used by RTCIS (only logged). RTCIS will use the control group associated with the unit load in the RTCIS database, regardless of the control group passed by the ASRS. | A12 |
| withdrawal\_output\_status | Not used by RTCIS (only logged) | A2 |
| User\_id | ASRS user/application name. Not used by RTCIS (only logged) | A20 |
| Message\_Timestamp | ASRS timestamp in – YYYYMMDDHHMMSSss format. Not used by RTCIS (only logged) | D16 |

*RAI Next Generation Interface Definition*

## 2013.2 – Movement confirm (MOVEMENT\_CONFIRM) – Msg 15

**Transmitted:** ASRS to RTCIS

## Segment Tag: MOVE\_CONF\_SEG – Msg 15

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| LODNUM | 30 | N | Load number | [Unit\_load\_id](#actlocchg_Unit_load_id) |
| DSTLOC | 20 | Y | Destination location | [Activ\_output\_location](#actlocchg_Activ_output_location) |
| OVRLOC | 20 | Y | Override location | Not used in RTCIS |
| OVRREA | 10 | Y | Override reason | Not used in RTCIS |
| LOAD\_ATTR1 FLG | 1 | Y | Load attribute number 1 | Not used in RTCIS |
| LOAD\_ATTR2 FLG | 1 | Y | Load attribute number 2 | Not used in RTCIS |
| LOAD\_ATTR3 FLG | 1 | Y | Load attribute number 3 | Not used in RTCIS |
| LOAD\_ATTR4 FLG | 1 | Y | Load attribute number 4 | Not used in RTCIS |
| LOAD\_ATTR5 FLG | 1 | Y | Load attribute number 5 | Not used in RTCIS |

***Message 21 – Retrieve Next Shipment***

***Description***

This is a message sent from the ASRS to RTCIS to request the next available shipment or batched WD request to be transmitted to the ASRS for staging.

Note: [Message 41](#Messsage_41), which requests the next production order to stage, is also based on this message.

***Analysis***

This is really two messages in one functional call. The initial call indicates that the ASRS is requesting a new order and specifies the order type. Specifying the order type is a bit obfuscated, since the ASRS is specifying a message type and the message type is then mapped to MOT (Method of Transportation) code. RTCIS then uses the MOT code for criteria (along with various system parameters) for selecting the shipment. Note that the MOT code only applies the shipment selection; any batched withdrawal request will meet the search criteria (the message type indicating the MOT code does not affect withdrawal requests).

All of the other fields on the existing RAI functional call are used for RTCIS to pass data back to the ASRS. RTCIS transmit shipment header information, such as the scheduled shipment date/time, and a summary of each shipment line.

In general, this approach seems unusual (based on my previous experience). I am not sure why Retrotech/Activ (or any of the other ASRS vendors) would require this information about the shipment, or even why the ASRS should be required to initiate this request. RTCIS (or Prime), as the controlling system, should have enough information to determine if the location/spur needs the next shipment to be requested from the ASRS. *Open Issue: Should we continue to maintain this functionality?*

More important, the 2013.2 Interface does not have any transactions equivalent to this. All transactions below, being sent both to/from RTCIS, have been introduced for the RAI NG Interface.

*Open Issue: Need to investigate R21 message further. In some cases, this message must be transmitted (via host inbound) before a shipment is eligible to be staged (i.e. selected to be sent to the ASRS as a response to this message).*

*Existing RAI Interface Definition, to call to process()/get\_shipment() from actgetord*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | The message is used for shipment selection:   * A21 – The “MOT Code for ASRS Message A21” system parameter and the “Default value for MOT code” system parameters are used to select the shipments. The shipment will be selected   + If the A21 MOT system parameter is null   + If the shipments MOT code matches the A21 MOT Code parameter.   + If the shipments MOT is null and the default MOT matches the A21 MOT parameter (i.e. .the system parameters match). * B21 – Same logic, but the “MOT Code for ASRS Message B21” system parameter is used. * C21 – Same logic, but the “MOT Code for ASRS Message C21” system parameter is used. * D21 – Same logic, but the “MOT Code for ASRS Message D21” and “Default value for MOT code - D21, E21, F21” system parameters are used. * E21 – Same logic, but the “MOT Code for ASRS Message E21” and “Default value for MOT code - D21, E21, F21” system parameters are used. * F21 – Same logic, but the “MOT Code for ASRS Message F21” and “Default value for MOT code - D21, E21, F21” system parameters are used.   ***From the P&G RAI Interface doc:***  The MSX ASRS in London uses all three message types. When RTCIS receives an A21 message, it returns the data for the next available shipment where the MOT code = A. (MOT = Method Of Transport indicated on the shipment header.) See RTCIS change request CR119 for further explanation of how to configure RTCIS to handle the different message types. The London ORCA project required more Msg21 types (presumably D21,E21,F21). | A4 |
| ***Note: The message type, timestamp and user Id are the only fields passed from the ASRS to RTCIS. All other fields below are passed from RTCIS back to the ASRS.*** | | |
| Host\_control\_number | This number is assigned within RTCIS, generated by ap\_next\_host\_ctrl(). It consists of an M plus a 4 digit number. | N12 |
| Withdraw\_select\_flag | The calculated (lowest) QA status, based on all of the line items. For example, if four lines have a control group that is released (RL) and the fifth line item has a control group containing held inventory (HD), this field will be HD. | A2 |
| Scheduled\_Ship\_date | Date when shipment is scheduled for pickup by the carrier – YYYYMMDD format | D8 |
| Scheduled\_Ship\_time | Time when shipment is scheduled for pickup by the carrier – HHMMSSss format. This value in conjunction with the [scheduled\_ship\_date](#actgetord_Scheduled_Ship_date) is used by the ASRS to order the shipments in its work queue. | D8 |
| Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |
| User\_id | The ASRS ID of the program that initiated the message | A20 |
| Order\_disposition | Shipment Disposition (SHPHDR.ASRS\_DISP)   * Spaces – Normal Disposition * SS – Stage Short – Only Stages available Inventory * SO– Stage Open – Stage avail and wait for missing Inventory to arrive * SW – Stage anyWay – Stage Inventory regardless of Pallet Type | A2 |
| Line\_count | Line item count   * 0 indicates that there is not a shipment available for download. *Note: This is kind of an odd situation. RTCIS found the shipment but then determines there are no line items eligible to load from the ASRS. Why don’t we just skip this shipment, rather than telling the ASRS about a zero line item shipment?* * >0 indicates how many records are in the line\_item\_array. * -1 is an error code. | N8 |
|  |  |  |
| ***Line Item Details (per TRUKLD row)– repeated for each unit load request*** | | |
| Sequence | Sequence number of the unit load requested. This is determined by the “RAI: Message 21 Sequence By ((U)LID /(O)RDER /(R)TCIS)” system parameter.   * U – Every unit load is assigned a unique sequence number. The unit loads will be sequenced based on the normal RTCIS loading sequence (ORDHDR.STPSEQ, ORDHDR.STPSEQ, ORDHDR.ORDNUM, TRUKLD.ULPKSQ, TRUKLD.SEQVAL, TRUKLD.ULSUFF, TRUKLD.PLACEMENT\_HINT, TRUKLD.TRUKLD, which may also be in reverse sequence). * O – All unit loads on the same order number will be assigned the same sequence number. Note that the sequence number for the second (and subsequent orders) will jump up by the number of ULs on the previous order. * R – RTCIS will determine the sequencing based on the truck load information. If the truck load UL pick sequence (TRUKLD.ULPKSQ) is different or if the trailer was sequence by APAL and the AP3 sequence (TRUKLD.SEQVAL) is different, then a new sequence number will be assigned for the line sent to the ASRS. Note that the sequence number will only increase by one, even if multiple ULs were assigned to the previous sequence number. | N4 |
| Brand\_Code | The item code (TRUKLD.ITMCOD) | N8 |
| Code\_date | Optional. The control group. This field will normally be blank. Only specified if the order requires a specific control group (i.e. ORDCTL existing for line item).  If there not enough inventory in the ASRS (based on the RTCIS check) and the order disposition is SO (Stage Open), the control group will still be filled in.  *Open Issue: I would really appreciate if someone else looked at this (actgetord/get\_line\_items.ppc) to verify, but it appears to me that if there is not enough of the control group and the order disposition is something other than SO, we are still going to request the UL, but without the control group (even though the control group is specified by the ORDCTL row). Why would this make sense?* | A12 |
| Pallet\_Type | The pallet type requested for the UL. This is determined by selecting the pallet type associated with the shipments MOL code. The pallet type (MOLCOD.ULPALL) found using the MOL could is then translated code appropriate for the ASRS/PLC (ULPALL.PLCPAL). Based on the P&G Interface document, these are configured to be   * ACTIV - Q=CHEP and T=GMA. * MSX - U=CHEP, E=EURO, and W=WERO. * Any character can be used to indicate pallet type, but it must be the same in the ASRS data base and in the RTCIS data base. (ULPALL.PLCPAL) | A2 |
| Line\_qty | Always 1, for one unit load. | N8 |
| Fifo\_window | Optional. This is the number of days that defines the tolerance for FIFO picking, based on the associated item group setting (ITMGRP.FIFO\_WINDOW for the item where the group is configured for rack storage). The ASRS picks the oldest unit load or a unit load that is not more than N days newer than the oldest unit load.  The P&G Interface document states that this field is only used by the CIMAT ASRS. | N4 |

*RAI Next Generation Interface Definition*

Both of these transactions need to be defined for the RAI NG Interface, but are not covered by the 2003.2 Prime Interface.

## *RTCIS RAI NG (New)* – Request Next Shipment (REQ\_NEXT\_SHIP)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: REQ\_NEXT\_SHIP\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| MOTCOD | 1 | N | Pallet LPN | SHPHDR.MOTCOD indirectly specified in [Message\_type](#actgetord_Message_type) by the existing RAI message. |

*Open Issue – Should we consider adding any other shipment/order criteria to this?*

## *RTCIS RAI NG (New)* – Next Shipment for Staging (NEXT\_SHIP\_STAGE)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: NEXT\_SHIP\_STG\_SEG (one segment per Shipment)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#ACTIV_UL_output_req_Host_control_number) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| CLIENT\_ID | 32 | Y | Client ID | Not used in RTCIS |
| WKONUM | 20 | Y | Work order number | Not used in RTCIS |
| WKOREV | 10 | Y | Work order revision | Not used in RTCIS |
| MOTCOD | 1 | Y | Method of Transportation | MOTCOD Requested by the ASRS |
| QASTAT | 10 | Y | QA Status | [Withdraw\_select\_flag](#actgetord_Withdraw_select_flag) |
| SHIPDT | 14 | Y | Shipment Date/Time | [Scheduled\_Ship\_date](#actgetord_Scheduled_Ship_date) + [Scheduled\_Ship\_time](#actgetord_Scheduled_Ship_time) |
| ORDDIS | 10 | Y | Order Disposition | [Order Disposition](#actgetord_Order_disposition) |
| LINCNT | 10 | N | Line count (total number of NEXT\_UL\_STG\_SEG) | [Line\_count](#actgetord_Line_count) |

#### Segment Tag: NEXT\_UL\_SHIP\_STG\_SEG (one segment per Shipment/Unit Load)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#ACTIV_UL_output_req_Host_control_number) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_LINE\_ID | 10 | Y | Shipment line ID | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| CLIENT\_ID | 32 | Y | Client ID | Not used in RTCIS |
| ORDLIN | 10 | Y | Order line | Not used in RTCIS |
| ORDSLN | 10 | Y | Order sub-line | Not used in RTCIS |
| WKONUM | 20 | Y | Work order number | Not used in RTCIS |
| WKOREV | 10 | Y | Work order revision | Not used in RTCIS |
| WKOLIN | 10 | Y | Work order line | Not used in RTCIS |
| SRCLOC | 20 | Y | Source location | Always “ASRS” |
| SEQNUM | 10 | N | Sequence number | [Sequence](#actgetord_Sequence) |
| PRTNUM | 50 | Y | Part number | [Brand\_code](#actgetord_Brand_Code) |
| PCKQTY | 10 | Y | Pick quantity in eaches | Always one, based on [line\_qty](#actgetord_Line_qty) |
| PCK\_UOM | 2 | Y | Pick unit of measure | Not used in RTCIS |
| UOMQTY | 10 | Y | Unit of measure quantity | Not used in RTCIS |
| DSTLOC | 20 | Y | Destination location | Not used in RTCIS |
| ASSET\_TYP | 30 | Y | Asset type | Not used in RTCIS |
| EXPIRE\_DTE | 14 | Y | Expiration date | Not used in RTCIS |
| FTPCOD | 30 | Y | Footprint code | Not used in RTCIS |
| LOTNUM | 25 | Y | Lot number (Optional and rarely used) | [Code\_date](#actgetord_Code_date) |
| MANDTE | 14 | Y | Manufacture date | Not used in RTCIS |
| FIFO\_WIN | 10 | Y | FIFO Picking window | [Fifo\_window](#actgetord_Fifo_window) |
| ORGCOD | 25 | Y | Origin code | Not used in RTCIS |
| PRT\_CLIENT\_ID | 32 | Y | Client part number | Not used in RTCIS |
| REVLVL | 25 | Y | Revision level | Not used in RTCIS |
| UNTCAS | 10 | Y | Units per case | Not used in RTCIS |
| UNTPAK | 10 | Y | Units per pack | Not used in RTCIS |
| SUP\_LOTNUM | 25 | Y | Supplier lot number | Not used in RTCIS |
| PALTYP | 10 | Y | Pallet Type | [Pallet\_Type](#actgetord_Pallet_Type) |

***Message 22 – Order Staging Started***

***Description***

The ASRS sends this message to RTCIS to indicate that staging has started for a shipment or withdrawal request. The message includes the location/spur that the unit loads will be delivered to.

This message can also indicate that de-staging has started for a canceled shipment. *Open Issue: I am not sure that I understand the concept of de-staging. If the order/shipment is canceled, why would the ASRS be initiating this process?*

Note: [Message 42](#Messsage_42), which indicates the start of a production order, is also based on this message.

***Analysis***

The normal A22 just calls db\_\_trukld\_signon() with the staging location. The D22 calls db\_\_unstage\_reqs() for creating a row in the UNSTAGE\_REQS table. *I need to understand the D22 scenario and some of the error situations (like a negative number for the location)*

*Existing RAI Interface Definition, to call to process()/process\_destage() from actstgstrt*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | A22 – ASRS has started staging an order  D22 – ASRS has started to De-stage Order | A4 |
| Host\_control\_number | This is the [host control number](#actgetord_Host_control_number) supplied in [Message 21](#Messsage_21). The P&G Interface document states that this is black for D22. *Open issue: Why is this blank for D22? Can we receive D22 without a 21 message?* | A12 |
| Activ\_output\_location | This is the output location/spur to which unit loads will be delivered. For an ACTIV ASRS, this is a slot number. Note: If this is a negative number, the shipment/request is reset to available. *Open Issue: When/why does this happen?* | A5 |
| User\_id | ASRS user/application name. Not used by RTCIS (only logged) | A20 |
| Message\_Timestamp | ASRS timestamp in – YYYYMMDDHHMMSSss format. Not used by RTCIS (only logged) | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Start Shipment Staging (STRT\_SHIP\_STAGE)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: STRT\_SHIP\_STG\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#actstgstrt_Host_control_number) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| CLIENT\_ID | 32 | Y | Client ID | Not used in RTCIS |
| WKONUM | 20 | Y | Work order number | Not used in RTCIS |
| WKOREV | 10 | Y | Work order revision | Not used in RTCIS |
| MOTCOD | 1 | Y | Method of Transportation | MOTCOD Requested by the ASRS |
| DSTLOC | 20 | N | Destination Location/Spur | [Activ\_output\_location](#actstgstrt_Activ_output_location) |

***Message 23 – Unit Load Staged***

***Description***

The normal A23 message indicates that a unit load has been delivered to a staging lane for an order/shipment or a withdrawal request. Some ASRS systems (Activ) will send one message for each unit load. Other ASRS system (CMAT) will send one message for each stack. If the “ASRS: Location for ASRS” system parameter equals “ACTIV”, RTCIS will expect one message per unit load. Otherwise, RTCIS will process all unit loads associated with the stack.

If the request is being de-staged, the D23 message will be sent for each unit load that has been de-staged back into the ACTIV system. Also note that de-staging assumes that the ASRS system will send one message per UL (not stack), regardless of the ASRS vendor.  *Open issue: Does the tech actually move the unit load to make this happen? Or does RTCIS simply receive notification of this (assuming that we received a normal A23 when it was originally staged)? And, does anyone besides Activ use this?*

Note: [Message 43](#Messsage_43), which indicates the delivery of a unit load for a production order, is also based on this message.

***Analysis***

Just calls the corresponding routine (db\_\_trukld\_deposit, db\_\_wdreq\_stage\_ul, db\_\_destage\_asrs\_ul) to stage/de-stage the unit load.

*Existing RAI Interface Definition, to call to process()/process\_destage() from actulstage*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | A23 – ASRS has moved a unit load into a staging lane  D23 – ASRS has De-stage a unit load | A4 |
| Host\_control\_number | Matches the [Host\_control\_number](#actgetord_Host_control_number) sent in the corresponding [Message 21](#Messsage_21). | A12 |
| Unit\_load\_id | Unit load barcode including check digit. RTCIS will verify the pick matches the picking requestirements. | N20 |
| Activ\_output\_location | This is the output location/spur where the ASRS delivered the Unit Load. For an ACTIV ASRS, this is a slot number. | A5 |
| Activ\_level\_id | Not used by RTCIS (only logged) | A2 |
| Pallet\_type\_code | Not used by RTCIS (only logged). RTCIS will use the pallet type associated with the unit load in the RTCIS database, regardless of the pallet type passed by the ASRS | A2 |
| Brand\_Code | Not used by RTCIS (only logged). RTCIS will use the item class and item code associated with the unit load in the RTCIS database, regardless of the brand code passed by the ASRS. | N8 |
| Code\_date | Not used by RTCIS (only logged). RTCIS will use the control group associated with the unit load in the RTCIS database, regardless of the control group passed by the ASRS. | A12 |
| Line\_item\_sequence\_number | This value must match a [sequence number](#actgetord_Sequence) from [Message 21](#Messsage_21) for an A23. Blank for D23 | N4 |
| User\_id | ASRS user/application name. Not used by RTCIS (only logged) | A20 |
| Message\_Timestamp | ASRS timestamp in – YYYYMMDDHHMMSSss format. Not used by RTCIS (only logged) | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Stage confirm (STAGE\_CONFIRM)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: STAGE\_CONF\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#actulstage_Host_control_number) |
| LODNUM | 30 | N | Pallet LPN | [Unit\_load\_id](#actulstage_Unit_load_id) |
| DSTLOC | 20 | Y | Physical pallet location | [Activ\_output\_location](#actulstage_Activ_output_location) |
| SEQNUM | 10 | N | Sequence number | [Line\_item\_sequence\_number](#actulstage_Line_item_sequence_number) |

***Message 24 – Order Staging Complete***

***Description***

The ASRS sends this message to RTCIS to indicate that staging has completed for a shipment or withdrawal request.

Note: [Message 44](#Messsage_44), which indicates the start of a production order, is also based on this message.

***Analysis***

Calls db\_\_inasrs\_wdsubr() for completing or canceling a withdrawal request.

Calls db\_inasrs() to set the status of the shipment and then attempts to close each order on the shipment by calling db\_\_chk\_ord\_compl().

Calls db\_\_unstage\_reqs() for de-staging.

*Existing RAI Interface Definition, to call to stage\_ship\_cmp()/ship\_wdreq\_cmp()/ destage\_cmp() from actstgcmp*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | A24 – ASRS has completed staging an order  D24 – ASRS has completed de-staging an order | A4 |
| Host\_control\_number | This is the [host control number](#actgetord_Host_control_number) supplied in [Message 21](#Messsage_21). The P&G Interface document states that this is black for D24. | A12 |
| Activ\_output\_location | Not used by RTCIS (only logged). | A5 |
| User\_id | ASRS user/application name. Not used by RTCIS (only logged) | A20 |
| Message\_Timestamp | ASRS timestamp in – YYYYMMDDHHMMSSss format. Not used by RTCIS (only logged) | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Stop Shipment Staging (STOP\_SHIP\_STAGE)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: STOP\_SHIP\_STG\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#actstgcmp_Host_control_number) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| CLIENT\_ID | 32 | Y | Client ID | Not used in RTCIS |
| WKONUM | 20 | Y | Work order number | Not used in RTCIS |
| WKOREV | 10 | Y | Work order revision | Not used in RTCIS |

***Message 41 – Retrieve Next Customization Order***

***Description***

This is a message sent from the ASRS to RTCIS to request the next available production order to be transmitted to the ASRS for staging. This message is a copy of the [Message 21](#Messsage_21), which requests the next order for staging.

Before processing this message, RTCIS will verify the “ASRS\_PO\_DELV Is the Site Using ASRS PO Delivery?” system parameter is set to true/yes.

RTCIS will transmit all eligible production orders to the ASRS based on this single request. A production order is considered eligible if the

***Analysis***

This is really two messages in one functional call. Refer to the analysis of [Message 21](#Messsage_21) for more information.

*Existing RAI Interface Definition, to call to process\_prdrls() from actgetord*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A41 | A4 |
| ***Note: The message type, timestamp and user Id are the only fields passed from the ASRS to RTCIS. All other fields below are passed from RTCIS back to the ASRS.*** | | |
| Host\_control\_number | This number is assigned within RTCIS, generated by ap\_next\_host\_ctrl(). It consists of an M plus a 4 digit number. | N12 |
| delivery\_location\_stype | The production line number (PRDRLS.PLNUMB) to deliver the inventory to. *Open Issue: How does the ASRS know what location/spur to deliver the inventory to? Is there a mapping of the PL to Spur maintained by the ASRS system?* | A7 |
| Scheduled\_Ship\_date | Date (PRDRLS.ACTDAT) when production is scheduled to start – YYYYMMDD format | D8 |
| Scheduled\_Ship\_time | Time when production is scheduled to start – HHMMSSss format. . | D8 |
| Timestamp | The timestamp of the request - YYYYMMDDHHMMSSss | D16 |
| User\_id | The ASRS ID of the program that initiated the message | A20 |
| Order\_disposition | Production line disposition (PRDRLS.ASRS\_DISP)   * Spaces – Normal Disposition * SS – Stage Short – Only Stages available Inventory * SO– Stage Open – Stage avail and wait for missing Inventory to arrive * SW – Stage anyWay – Stage Inventory regardless of Pallet Type | A2 |
| Line\_count | Line item count   * 0 indicates that there are now material requests for this production order. *Note: This is kind of an odd situation. RTCIS found the production order but then determines there are no line items eligible to load from the ASRS. Why don’t we just skip this production order, rather than telling the ASRS about a zero line item count?* * >0 indicates how many records are in the line\_item\_array. * -1 is an error code. | N8 |
|  |  |  |
| ***Line Item Details (per MATREQ row)– repeated for each unit load request*** | | |
| Sequence | Material request staging request sequence number. | N4 |
| Brand\_Code | The requite item (spec) code (MATREQ.REQITM) | N8 |
| Code\_date | Always spaces | A12 |
| Pallet\_Type | The pallet type requested for the UL based on the **default** item configuration (ITEM\_CONFIG.ULPALL). The pallet type found is then translated code appropriate for the ASRS/PLC (ULPALL.PLCPAL). Based on the P&G Interface document, these are configured to be   * ACTIV - Q=CHEP and T=GMA. * MSX - U=CHEP, E=EURO, and W=WERO. * Any character can be used to indicate pallet type, but it must be the same in the ASRS data base and in the RTCIS data base. (ULPALL.PLCPAL) | A2 |
| Line\_qty | Always 1, for one unit load. | N8 |
| Fifo\_window | Optional. This is the number of days that defines the tolerance for FIFO picking, based on the associated item group setting (ITMGRP.FIFO\_WINDOW. The ASRS picks the oldest unit load or a unit load that is not more than N days newer than the oldest unit load.  The P&G Interface document states that this field is not used for A41, but RTCIS is passing it as described above. | N4 |

*RAI Next Generation Interface Definition*

Both of these transactions need to be defined for the RAI NG Interface, but are not covered by the 2003.2 Prime Interface.

## *RTCIS RAI NG (New)* – Request Next Prod Order (REQ\_NEXT\_PRDORD)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: REQ\_NEXT\_PRDORD\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| PLNUMB | 10 | N | Production line number | Always “ALL”  *Note: Could specify actual line (PRDRLS.PRDNUMB) in the future.* |

*Open Issue – Should we consider adding any other shipment/order criteria to this?*

## *RTCIS RAI NG (New)* – Next Prod Order Staging (NEXT\_PRDORD\_STAGE)

**Transmitted:** RTCIS to ASRS

#### Segment Tag: NEXT\_PRDORD\_STG\_SEG (one segment per Order)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#actgetord2_Host_control_number) |
| WRKTYP | 1 | Y | Work type | Always “P” for production order |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| CLIENT\_ID | 32 | Y | Client ID | Not used in RTCIS |
| WKONUM | 20 | Y | Work order number | Not used in RTCIS |
| WKOREV | 10 | Y | Work order revision | Not used in RTCIS |
| MOTCOD | 1 | Y | Method of Transportation | MOTCOD Requested by the ASRS |
| QASTAT | 10 | Y | QA Status | Always “RL” |
| SHIPDT | 14 | Y | Shipment Date/Time | [Scheduled\_Ship\_date](#actgetord2_Scheduled_Ship_date) + [Scheduled\_Ship\_time](#actgetord_Scheduled_Ship_time) |
| ORDDIS | 10 | Y | Order Disposition | Order Disposition |
| LINCNT | 10 | N | Line count (total number of NEXT\_UL\_STG\_SEG) | [Line\_count](#actgetord2_Line_count) |

#### Segment Tag: NEXT\_UL\_PRDORD\_STG\_SEG (one segment per Order/Unit Load)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#actgetord2_Host_control_number) |
| WRKTYP | 1 | Y | Work type | Always “P” for production order |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_LINE\_ID | 10 | Y | Shipment line ID | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| CLIENT\_ID | 32 | Y | Client ID | Not used in RTCIS |
| ORDLIN | 10 | Y | Order line | Not used in RTCIS |
| ORDSLN | 10 | Y | Order sub-line | Not used in RTCIS |
| WKONUM | 20 | Y | Work order number | Not used in RTCIS |
| WKOREV | 10 | Y | Work order revision | Not used in RTCIS |
| WKOLIN | 10 | Y | Work order line | Not used in RTCIS |
| SRCLOC | 20 | Y | Source location | Always “ASRS” |
| SEQNUM | 10 | N | Sequence number | [Sequence](#actgetord2_Sequence) |
| PRTNUM | 50 | Y | Part number | [Brand\_code](#actgetord2_Brand_Code) |
| PCKQTY | 10 | Y | Pick quantity in eaches | Always one, based on [line\_qty](#actgetord2_Line_qty) |
| PCK\_UOM | 2 | Y | Pick unit of measure | Not used in RTCIS |
| UOMQTY | 10 | Y | Unit of measure quantity | Not used in RTCIS |
| DSTLOC | 20 | Y | Destination location | Not used in RTCIS |
| ASSET\_TYP | 30 | Y | Asset type | Not used in RTCIS |
| EXPIRE\_DTE | 14 | Y | Expiration date | Not used in RTCIS |
| FTPCOD | 30 | Y | Footprint code | Not used in RTCIS |
| LOTNUM | 25 | Y | Lot number (Optional and rarely used) | [Code\_date](#actgetord2_Code_date) |
| MANDTE | 14 | Y | Manufacture date | Not used in RTCIS |
| FIFO\_WIN | 10 | Y | FIFO Picking window | [Fifo\_window](#actgetord2_Fifo_window) |
| ORGCOD | 25 | Y | Origin code | Not used in RTCIS |
| PRT\_CLIENT\_ID | 32 | Y | Client part number | Not used in RTCIS |
| REVLVL | 25 | Y | Revision level | Not used in RTCIS |
| UNTCAS | 10 | Y | Units per case | Not used in RTCIS |
| UNTPAK | 10 | Y | Units per pack | Not used in RTCIS |
| SUP\_LOTNUM | 25 | Y | Supplier lot number | Not used in RTCIS |
| PALTYP | 10 | Y | Pallet Type | [Pallet\_Type](#actgetord2_Pallet_Type) |

***Message 42 – Customization Order Staging Started***

***Description***

The ASRS sends this message to RTCIS to indicate that staging has started for a production order. The message includes the location/spur that the unit loads will be delivered to.

This message is a copy of the [Message 22](#Messsage_22), which indicates the start of order staging.

***Analysis***

The message just calls db\_\_upd\_prdrls\_stgloc() with the location/spur.

*Existing RAI Interface Definition, to call to process\_prdrls() from actstgstrt*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A42 | A4 |
| Host\_control\_number | This is the [host control number](#actgetord2_Host_control_number) supplied in [Message 41](#Messsage_41). | A12 |
| Activ\_output\_location | This is the output location/spur to which unit loads will be delivered. For an ACTIV ASRS, this is a slot number. | A5 |
| Delivery\_location | Not used in RTCIS (not even logged) | A7 |
| User\_id | ASRS user/application name. Not used by RTCIS (only logged) | A20 |
| Message\_Timestamp | ASRS timestamp in – YYYYMMDDHHMMSSss format. Not used by RTCIS (only logged) | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Start Production Order Staging (STRT\_PRDORD\_STAGE)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: STRT\_PRODORD\_STG\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#actgetord2_Host_control_number) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| CLIENT\_ID | 32 | Y | Client ID | Not used in RTCIS |
| WKONUM | 20 | Y | Work order number | Not used in RTCIS |
| WKOREV | 10 | Y | Work order revision | Not used in RTCIS |
| MOTCOD | 1 | Y | Method of Transportation | MOTCOD Requested by the ASRS |
| DSTLOC | 20 | N | Destination Location/Spur | Activ\_output\_location |

***Message 43 – Customization Order Unit Load Staged***

***Description***

This message indicates that a unit load has been delivered to a staging lane for a production order. It is sent for each unit load.

This message is a copy of the [Message 23](#Messsage_23), which indicates the delivery of a unit load for order staging.

***Analysis***

Just calls db\_\_stage\_prdrls\_ul() to stage the unit load.

*Existing RAI Interface Definition, to call to process\_prdrls() from actulstage*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A43 | A4 |
| Host\_control\_number | Matches the [Host\_control\_number](#actgetord2_Host_control_number) sent in the corresponding [Message 43](#Messsage_43). | A12 |
| Unit\_load\_id | Unit load barcode including check digit. RTCIS will verify the pick matches the picking requirements. | N20 |
| Activ\_output\_location | This is the output location to which pallets will be delivered. For an ACTIV ASRS, this is a slot number. | A5 |
| Activ\_level\_id | Not used by RTCIS (only logged) | A2 |
| Pallet\_type\_code | Not used by RTCIS (only logged). RTCIS will use the pallet type associated with the unit load in the RTCIS database, regardless of the pallet type passed by the ASRS | A2 |
| Brand\_Code | Not used by RTCIS (only logged). RTCIS will use the item class and item code associated with the unit load in the RTCIS database, regardless of the brand code passed by the ASRS. | N8 |
| Code\_date | Not used by RTCIS (only logged). RTCIS will use the control group associated with the unit load in the RTCIS database, regardless of the control group passed by the ASRS. | A12 |
| Line\_item\_sequence\_number | This value must match a [sequence number](#actgetord2_Sequence) from [Message 41](#Messsage_41) for an A23. Blank for D23 | N4 |
| User\_id | ASRS user/application name. Not used by RTCIS (only logged) | A20 |
| Message\_Timestamp | ASRS timestamp in – YYYYMMDDHHMMSSss format. Not used by RTCIS (only logged) | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Stage confirm (STAGE\_CONFIRM)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: STAGE\_CONF\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| WRKREF | 12 | Y | Work reference | Host\_control\_number |
| LODNUM | 30 | N | Pallet LPN | Unit\_load\_id |
| DSTLOC | 20 | Y | Physical pallet location | Activ\_output\_location |
| SEQNUM | 10 | N | Sequence number | Line\_item\_sequence\_number |

***Message 44 – Customization Order Staging Complete***

***Description***

The ASRS sends this message to RTCIS to indicate that staging has completed for a production order.

This message is a copy of the [Message 24](#Messsage_24), which indicates the end of order staging.

***Analysis***

Calls db\_\_upd\_prdrls\_cancel() to complete or cancel a production order.

*Existing RAI Interface Definition, to call to stage\_prdrls\_cmp() from actstgcmp*

|  |  |  |
| --- | --- | --- |
| ***Field Name*** | ***Description*** | ***Data Type*** |
| Message\_type | Always A44 | A4 |
| Host\_control\_number | This is the [host control number](#actgetord2_Host_control_number) supplied in [Message 41](#Messsage_41). | A12 |
| Activ\_output\_location | Not used in RTCIS (just logged) | A5 |
| Delivery\_location | Not used in RTCIS (not even logged) | A7 |
| User\_id | ASRS user/application name. Not used by RTCIS (only logged) | A20 |
| Message\_Timestamp | ASRS timestamp in – YYYYMMDDHHMMSSss format. Not used by RTCIS (only logged) | D16 |

*RAI Next Generation Interface Definition*

## *RTCIS RAI NG (New)* – Stop Production Order Staging (STOP\_PRDORD\_STAGE)

**Transmitted:** ASRS to RTCIS

#### Segment Tag: STOP\_PRODORD\_STG\_SEG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field Name or Element Name | Size | Null? | Description, Valid Values, Codes, Comments | RTCIS Value |
| SCHBAT | 32 | Y | Schedule batch | Not used in RTCIS |
| WRKREF | 12 | Y | Work reference | [Host\_control\_number](#actstgcmp2_Host_control_number) |
| WRKTYP | 1 | Y | Work type | S for shipment, W for Withdrawal Request |
| CAR\_MOVE\_ID | 10 | Y | Carrier move ID | Not used in RTCIS |
| STOP\_SEQ | 10 | Y | Stop sequence | Not used in RTCIS |
| SHIP\_ID | 30 | Y | Shipment ID | Not used in RTCIS |
| ORDNUM | 35 | Y | Order line | Not used in RTCIS |
| CLIENT\_ID | 32 | Y | Client ID | Not used in RTCIS |
| WKONUM | 20 | Y | Work order number | Not used in RTCIS |
| WKOREV | 10 | Y | Work order revision | Not used in RTCIS |