



# **ARTS POSLog V6.0**

## **Volume 3: Sales Interruption Technical Specification**

February 10, 2014 – Last Call Working Draft

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### 1. Abstract

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#### 1.1 Overview

This volume discusses a transaction response when an Item has been added to a sale transaction, but some circumstance prevents the merchant completing the sale. This is not an error but an interruption, due to retailer policy enforced by the POS and the logging of the prevented sale is required.

The reasons why this may happen include:

- **AgeRestriction** – Customer must verify their age and will be refused if they are not old enough to purchase the item. E.g. Alcohol, Weapons
- **DestinationRestriction** – Airport use; item cannot be sold for passengers on flights to a particular destination.
- **ProductStop** – Product has a quality issue and should have been cleared from the shelves.
- **QuantityRestricted** – Legal or Retailer enforcement of guideline restriction on quantity per transaction. For example, in the UK there are guidelines that recommend no more than 32 tablets of paracetamol (acetaminophen) per transaction, which is enforced through the POS system preventing the sale of more than 2 x 16 Pack.
- **TimeRestriction** – Legal restriction on hours of sale, such as in Scotland alcohol can only be sold on a Sunday between the hours of 12:30pm and 10pm.

Most of these reasons relate to legislation where the retailer may be accused of not complying with the rules and therefore require the POS to log incidents as evidence that they are complying.

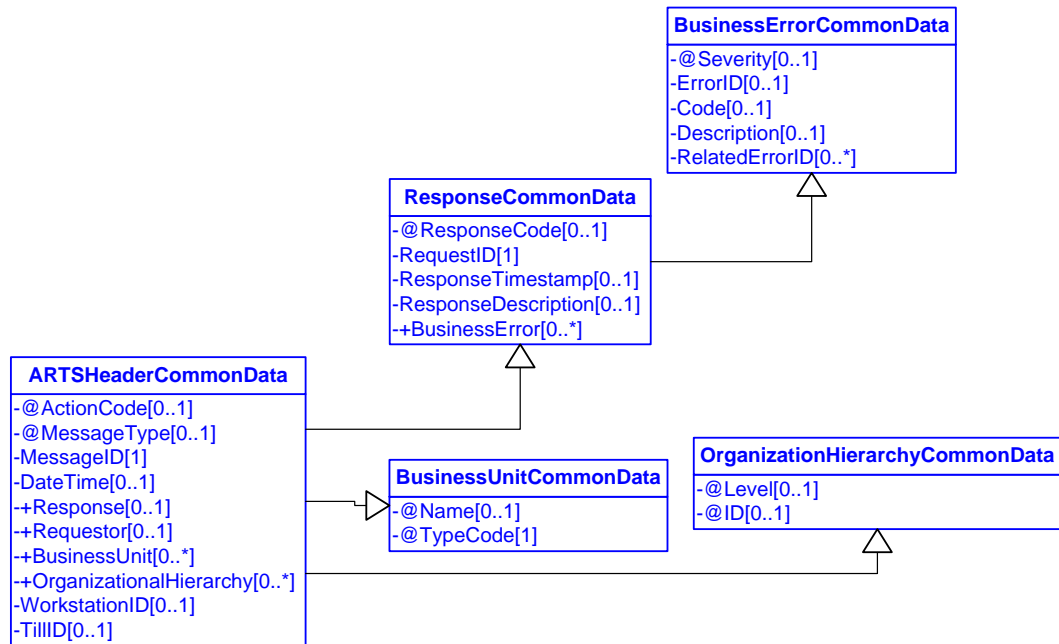
## **2. Referenced Documents**

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- **ARTS Technical Committees Development Process V6.0.4 2009/11/30**
- **ARTS XML Best Practices V2.2 2010/11/11**
- **ARTS Best Practice for Process Modeling V1.0.0 2011/01/04**
- **A RTS SOA Best Practices Technical Report V1.2**
- **ARTS XML Interface Conformance Tool Manual V1.0 2005/08/11**

These documents are available for download from <http://nrf.com>

### 3. ARTS Common Header



**Figure 1: ARTS Common Header Domain View**

The ARTS common header is used in all service name schemas. It provides the ability to set session level information and return business error information in one standard format to all SOA implementations.



**Figure 2: ARTS Common Header Representation**

Since this structure is common to all service name schemas, it will not be replicated below. In place of the details, the attached box will be used to represent this complex type structure.

## 4. Use Case: Refused Sale

---

### 4.1 Scenario: Refused sale after recorded in the transaction

#### Brief Description

An item rings up for Customer, cannot be sold, but it is recorded as part of the transaction.

There is a CancelFlag with an Action Code of Refused and a Refusal Reason.

The Item is removed from the transaction and implicitly returned to the shelves.

The RefusalReason could be used for response to legal challenges e.g. Police: "You are selling alcohol to under-age persons", Retailer: "The transactions log shows 50 instances in the last month where we refused to sell to customers without prove of age".

#### Scenario Description

Joe, aged 16, went into The Retail Shop and tried to buy a sleeping bag (\$20) and some ammunition to use for hunting this weekend. The law restricts ammunition sales to those over 18. So he bought only the sleeping bag.

#### Pre-Conditions

#### Post-Conditions

#### Data

### 4.1 ARTS XML Conformance XML Instance Document – Refused Sale

```
<?xml version="1.0" encoding="UTF-8"?>
<POSLog xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
  ../POSLogV6.0.0.xsd"
  xmlns="http://www.nrf-arts.org/IXRetail/namespace/" MajorVersion="6"
  MinorVersion="0"
  FixVersion="0">
  <Transaction>
    <BusinessUnit>
      <UnitID Name="The Retail shop">100</UnitID>
    </BusinessUnit>
    <WorkstationID>POS5</WorkstationID>
    <SequenceNumber>4294967295</SequenceNumber>
    <OperatorID>John</OperatorID>
    <RetailTransaction>
      <!-- Sleeping Bag -->
      <LineItem>
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <ExtendedAmount>20.00</ExtendedAmount>
        </Sale>
      </LineItem>
    </RetailTransaction>
  </Transaction>
</POSLog>
```

```
<SequenceNumber>1</SequenceNumber>
</LinItem>
<!-- Ammunition -->
<LinItem CancelFlag="true" Action="Refusal"
RefusalReason="AgeRestriction">
  <Sale ItemType="Stock">
    <ItemID>34345345</ItemID>
    <ExtendedAmount>25.00</ExtendedAmount>
  </Sale>
  <SequenceNumber>2</SequenceNumber>
  <RequiredAge>18</RequiredAge>
  <RestrictionValidation>
    <QuestionText>How old are you</QuestionText>
    <QuestionAnswer>16</QuestionAnswer>
  </RestrictionValidation>
</LinItem>
<LinItem>
  <Tender>
    <Amount>20.00</Amount>
  </Tender>
</LinItem>
</RetailTransaction>
</Transaction>
</POSLog>
```

## **4.2 Scenario: Faulty Item Sale Refused with Stock Movement**

### **Brief Description**

A product has been withdrawn from Sale by the manufacturer because of a fault that makes it potentially dangerous to the public. The manufacturer has notified the retailer and asked that they return all stock for QA purposes.

The retailer removes stock from the warehouse and store display, but customers may be carrying the item around in their baskets (or may be returning them).

When the Customer attempts to purchase the item the POS will refuse to sell the item and instruct the Operator to label the Item to be returned to manufacturer using a label automatically generated by POS.

Low value items where return shipping costs exceed the value to the manufacturer may be sent to be recycled or otherwise disposed of.

In both cases, the item is removed with no sale involved. A return is accepted without condition and similarly labelled for RTM.

There is a CancelFlag with an Action Code of Refused and a Refusal Reason of ProductStop, plus the Reason associate with Product Stop is captured.

The Disposal of Return to Manufacturer with a tracking reference for Stock reconciliation purposes is additional information that doesn't appear to return to shelf type interruptions.

### Scenario Description

An electrical item has potentially faulty wiring that could cause a fire, and the manufacturer withdraws it from sale asking for the items to be returned for QA purposes.

When a customer attempts to pay for a safe item and the faulty item the POS refuses the second item sale and generates a Return to Manufacturer label for stock tracking. The customer continues with the purchase of the first item.

### Pre-Conditions

### Post-Conditions

### Data

#### 4.24.1 ARTS XML Conformance XML Instance Document – Refused Sale

```
<?xml version="1.0" encoding="UTF-8"?>
<POSLog xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
  ../POSLogV6.0.0.xsd"
  xmlns="http://www.nrf-arts.org/IXRetail/namespace/" MajorVersion="6"
  MinorVersion="0"
  FixVersion="0">
  <Transaction>
    <BusinessUnit>
      <UnitID Name="The Retail shop">100</UnitID>
    </BusinessUnit>
    <WorkstationID>POS5</WorkstationID>
    <SequenceNumber>4294967295</SequenceNumber>
    <OperatorID>John</OperatorID>
    <RetailTransaction>
      <!-- Blender -->
      <LinItem>
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <ExtendedAmount>150.00</ExtendedAmount>
        </Sale>
        <SequenceNumber>1</SequenceNumber>
      </LinItem>
      <!-- Faulty Microwave -->
      <LinItem CancelFlag="true" Action="Refusal" RefusalReason="ProductStop">
        <Sale ItemType="Stock">
          <ItemID>356675345</ItemID>
          <ExtendedAmount>250.00</ExtendedAmount>
          <Disposal Method="ReturnToManufacturer" >
            <Reference>RTM012345</Reference>
            <!-- The Recall ID from the Traceability schema -->
            <RecallID>1234</RecallID>
```



```
        </Disposal>
      </Sale>
      <SequenceNumber>2</SequenceNumber>
      <Reason> DNS0025</Reason>
    </LineItem>
  </LineItem>
  <Tender>
    <Amount>150.00</Amount>
  </Tender>
</LineItem>
</RetailTransaction>
</Transaction>
</POSLog>
```

#### 4.3 Scenario: Unknown Item

##### Brief Description

An Item is scanned for sale but is not recognized by POS (Unknown Item) - this can happen when Stock is sent to Store but a mistake has been made in the data setup or there is a problem updating the POS with Item identity information.

In this scenario the description and price is passed back to alert back office to the problem, and potentially create temporary lookup information that other POS in the store can use to avoid the interruption until it is correctly resolved.

The return scenario here may happen for items sold by bigger branches in a chain but not stocked by smaller branches. The item would generally be recognized by POS but as not stocked by the store would have a different disposal method. I am not sure that a Retailer would accept back an Item that they do not Stock and which the POS rejects as unknown in a way that would cause an identity and stock to be created for it.

##### Pre-Conditions

##### Post-Conditions

##### Data

#### 4.3 ARTS XML Conformance XML Instance Document – Unknown Item

```
<?xml version="1.0" encoding="UTF-8"?>
<POSLog xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
  xmlns="http://www.nrf-arts.org/IXRetail/namespace/" MajorVersion="6"
  MinorVersion="0"
  FixVersion="0">
  <Transaction>
    <BusinessUnit>
      <UnitID Name="The Retail shop">100</UnitID>
    </BusinessUnit>
    <WorkstationID>POS5</WorkstationID>
    <SequenceNumber>4294967295</SequenceNumber>
```

```
<OperatorID>John</OperatorID>
<RetailTransaction>
  <!-- Blender -->
  <LineItem>
    <Sale ItemType="Stock" NotNormallyStockedFlag="true">
      <POSIdentity POSIDType="Not Listed">
        <POSItemID>01234567890123</POSItemID>
      </POSIdentity>
      <ExtendedAmount>150.00</ExtendedAmount>
    </Sale>
    <SequenceNumber>1</SequenceNumber>
  </LineItem>
  <LineItem>
    <Tender>
      <Amount>150.00</Amount>
    </Tender>
  </LineItem>
</RetailTransaction>
</Transaction>
</POSLog>
```

## 5. USE CASE: ATTEMPT TO RETURN ITEM NOT ON FILE

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5.1 **Scenario:** Attempt to return item not sold in this store

### Brief Description

A customer tries to return a wedding gift not sold in this store. For customer service reasons, the manager allows them to return the gift. There may be an estimated price selected by the manager.

### Pre-Conditions

### Post-Conditions

### Data

Accept as return with conditions.

Conditions are to assign a new code. This is not assigned in POSLog but in the Item Maintenance Schema. Therefore the returned item is put in a category for later assignment.

Assign a "return" price

**5.1 ARTS XML Conformance XML Instance Document** – Attempt to return item not sold in this store

```
<?xml version="1.0" encoding="UTF-8"?>
<POSLog xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
  ../POSLogV6.0.0.xsd"
  xmlns="http://www.nrf-arts.org/IXRetail/namespace/" MajorVersion="6"
  MinorVersion="0"
  FixVersion="0">
  <Transaction TypeCode="ReturnTransaction">
    <BusinessUnit>
      <UnitID Name="The Retail shop">100</UnitID>
    </BusinessUnit>
    <WorkstationID>POS5</WorkstationID>
    <SequenceNumber>4294967295</SequenceNumber>
    <OperatorID>John</OperatorID>
    <RetailTransaction>
      <!-- Wedding Dress -->
      <LinItem>
        <Return ItemType="Stock">
          <MerchandiseHierarchy Level="Category">Wedding
Dress</MerchandiseHierarchy>
          <ExtendedAmount>200.00</ExtendedAmount>
          <ItemNotOnFileFlag>true</ItemNotOnFileFlag>
        </Return>
        <SequenceNumber>1</SequenceNumber>
      </LinItem>
    </RetailTransaction>
  </Transaction>
</POSLog>
```

```
<Tender>  
  <Amount>200.00</Amount>  
</Tender>  
</LineItem>  
</RetailTransaction>  
</Transaction>  
</POSLog>
```

## **6. Document History**

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## 7. Version History

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### Version 1.0

#### Overview

#### New Features

Sections	Description of Change
	-

#### Minor fixes

#### Deprecation

Sections	Description of Change
	-

#### Compatibility/Dependencies Issues

#### Previous Document

## 8. GLOSSARY

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Term	Definition