ARTS POSLog V6.0

Volume 2: Sale Line Items Technical Specification

February 10, 2014 – Last Call Working Draft

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1. Abstract

1.1 Overview

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2. Referenced Documents

- **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

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3. ARTS Common Header

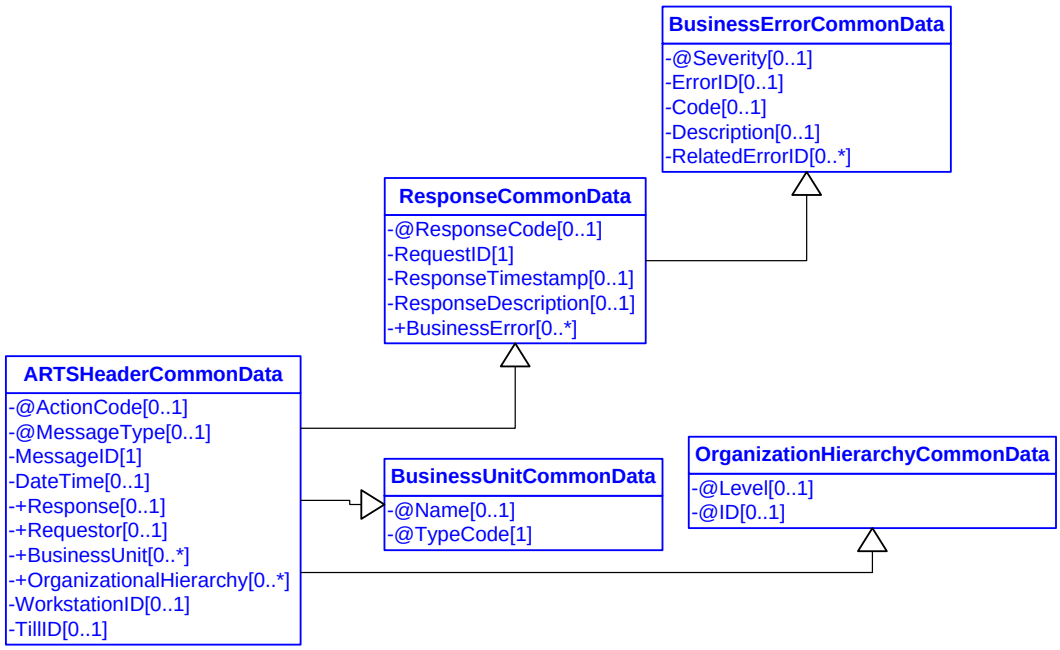

Figure 1: ARTS Common Header Domain View

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.

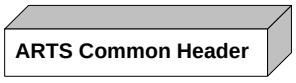

Figure 2: ARTS Common Header Representation

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.

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4. Use Case: Item purchase

One or more items are purchased via any one of a number of sales channels. The transaction is entered in via an appropriate application, and is sent using the POSLog schema to the POSLog application, which may forward to the transaction to other applications in the enterprise.

4.1 Scenario: Item Purchase at POS (V2.1)

Brief Description
Customer selects one or more items and purchases them. The number of those items available in inventory is decremented.

Scenario Description
Tom purchases three 4 oz. bars of dark chocolate. After this purchase, the store's inventory 4oz dark chocolate bars is reduced by three.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date & time the transaction was performed
  - A workstation assigned sequence number identifying the transaction

- Item sale data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold.
  - Unit price for the item being sold.
  - The extended amount (i.e. Unit price * the number of items being sold)

Sample XML Instance Document (shows what could be done)

```
<?xml version="1.0" encoding="UTF-8" ?>
<!-- UseCase: Item Purchase from shelf -->
<!-- Note: This example includes all optional fields -->
<POSLog
    xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
    POSLog.xsd">
    <Transaction CancelFlag="false" OfflineFlag="false"
    TrainingModeFlag="false">
      <RetailStoreID>HighStreet</RetailStoreID>
      <RevenueCenterID>6333-1221</RevenueCenterID>
      <WorkstationID>POS5</WorkstationID>
        <TillID>22</TillID>
       <SequenceNumber>4294967295</SequenceNumber>
      <BusinessDayDate>2001-08-13</BusinessDayDate>
      <BeginDateTime>2001-08-13T09:03:00</BeginDateTime>
      <EndDateTime>2001-08-13T09:05:00</EndDateTime>
      <OperatorID>John</OperatorID>
      <CurrencyCode>USD</CurrencyCode>
        <RetailTransaction Version="2.2" OutsideSalesFlag="false">
```

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```
            <ManagerApproval>false</ManagerApproval>
            <ReceiptDateTime>2001-08-13T09:04:32</ReceiptDateTime>
             <LineItem VoidFlag="false">
               <SequenceNumber>1</SequenceNumber>
               <BeginDateTime>2001-09-16T09:04:00</BeginDateTime>
               <EndDateTime>2001-09-16T09:04:03</EndDateTime>
                <Sale ItemType="Stock">
                <POSIdentity>
                    <POSItemID>01234567890123</POSItemID>
                </POSIdentity>
                <ItemID>CA7865</ItemID>
                                                    <MerchandiseHierarchy
                    Level="Department">Chocolates</MerchandiseHie
                    rarchy>
                <ItemNotOnFileFlag>false</ItemNotOnFileFlag>
                <Description>4oz Dark Chocolate</Description>

                    <TaxIncludedInPriceFlag>false</TaxIncludedInPrice
                    Flag>
                <UnitCostPrice>1.23</UnitCostPrice>
                <UnitListPrice>1.79</UnitListPrice>
                <RegularSalesUnitPrice>1.63</RegularSalesUnitPrice>
                <InventoryValuePrice>1.23</InventoryValuePrice>
                <ActualSalesUnitPrice>1.63</ActualSalesUnitPrice>
                <ExtendedAmount>4.89</ExtendedAmount>
                <DiscountAmount>0.00</DiscountAmount>

                    <ExtendedDiscountAmount>4.89</ExtendedDiscoun
                    tAmount>
                <Quantity>3</Quantity>
              </Sale>
            </LineItem>
            <Total TotalType="TransactionGrossAmount">4.89</Total>
          </RetailTransaction>
      </Transaction>
  </POSLog>
```

4.1 Conformance XML Instance Document – Item Purchase from Shelf

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase from shelf                                    -->
<!-- Note: This example includes no optional data, and shows the most minimal set of  --
>
<!--       data required to record a sale                                 -->
<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="HighStreet">100</UnitID></BusinessUnit>
       <WorkstationID>POS5</WorkstationID>
```

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```
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
        <LineItem>
          <Sale ItemType="Stock">
            <POSIdentity>
              <POSItemID>01234567890123</POSItemID>
            </POSIdentity>
            <ExtendedAmount>4.89</ExtendedAmount>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
      </RetailTransaction>
    </Transaction>
</POSLog>
```

4.2 Scenario: Item purchase via www or Tele-Sales (V2.1)

Brief Description

Customer selects one or more items for purchase via a website, or from a printed catalogue. Purchase order is accepted via one of www, fax or telephone along with payment details. The items purchased, are shipped to the customer, and inventory count for the items is decremented.

Data

- Transaction header data, including:
  - Identifier for the store performing the transaction.
  - The date the transaction was performed
  - A system assigned sequence number identifying the transaction
  - Identifier for the WWW server that processed the transaction.
- Item sale data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold.
  - Unit price for the item being sold.
  - The extended amount (i.e. Unit price * the number of items being sold)
  - Item inventory reservation tracking number.
- Delivery information for the transaction, or for each individual item purchased, including:
  - Name & Address for delivery
  - Preferred delivery method
  - Preferred delivery date & time

4.2a Conformance XML Instance Document – Item Purchase via WWW

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase via WWW                                    -->
<!-- Note: the eCommerce operation is treated as a particular store    -->
<!--              (called "eStore" in this example)                    -->
```

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```
<!--      WorkstationID is used to identify the eCommerce server        -->
<!--      OperatorID is not relevant, and is missing                    -->
<!--      Addition of InventoryReservation & Delivery                   -->
<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="eStore">120</UnitID>
      </BusinessUnit>
      <WorkstationID>Server2</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <SaleForDelivery ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>489.00</ExtendedAmount>
               <Quantity>3</Quantity>
               <Delivery>
                  <Name>
                     <Name>Jones</Name>
                  </Name>
                  <Address>
                     <AddressLine>325 7th St. NW.</AddressLine>
                     <AddressLine>Suite 1100</AddressLine>
                     <City>Washington</City>
                     <Territory>D.C.</Territory>
                  </Address>
                  <TelephoneNumber>
                     <AreaCode>601</AreaCode>
                     <LocalNumber>555-4793</LocalNumber>
                  </TelephoneNumber>
               </Delivery>
            </SaleForDelivery>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

4.2b Alternative Conformance XML Instance Document – Item Purchase via WWW

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase via WWW                                    -->
<!-- Note: The eCommerce operation is treated as a separate particular store      -->
```

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```
<!--          (called "eStore" in this example)                                  -->
<!--      WorkstationID can be used to identify the eCommerce server                  -->
<!--      OperatorID is not relevant, and is missing                                 -->
<!--      Addition of InventoryReservation                                           -->
<!--      Delivery is a part of the transaction header, it is not a the line item level -->
<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="eStore">232323</UnitID>
      </BusinessUnit>
      <WorkstationID>Server2</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <SaleForDelivery ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>489.00</ExtendedAmount>
               <Quantity>3</Quantity>
            </SaleForDelivery>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
         <Total TotalType="TransactionGrossAmount">489.00</Total>
         <Delivery>
            <Name>
               <Name>Jones</Name>
            </Name>
            <Address>
               <AddressLine>325 7th St. NW.</AddressLine>
               <AddressLine>Suite 1100</AddressLine>
               <City>Washington</City>
               <Territory>D.C.</Territory>
            </Address>
            <TelephoneNumber>
               <AreaCode>610</AreaCode>
               <LocalNumber>555-4793</LocalNumber>
            </TelephoneNumber>
         </Delivery>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

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4.3 Scenario: Item purchase for alteration & subsequent pickup (V2.1)

Brief Description

Customer selects some kitchen cabinets from unpainted models on shop floor, and selects color for them to be painted. The paint-shop takes the cabinets from inventory, paints them and makes them available for the customer to pick up.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item sale data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold.
  - Unit price for the item being sold.
  - The extended amount (i.e. Unit price * the number of items being sold)
  - Alteration details
  - Inventory reservation tracking number
  - Alteration tracking number
- Customer contact details, including:
  - Name
  - Address
  - Phone Numbers

4.3a Conformance XML Instance Document – Item Purchase for Alteration & Subsequent Pickup

NOTE: Pickup information and alteration information is on the item

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase for Subsequent Pickup -->
<!-- Note: Inclusion of Alteration instructions as part of a Kit -->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" MinorVersion="0" FixVersion="0">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <SaleForPickup ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>375.00</ExtendedAmount>
```

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```
            <Quantity>1</Quantity>
            <Kit>
               <Member Action="IsPartOf">
                  <SaleForPickup ItemType="Alteration">
                     <SpecialOrderNumber>AQ-629</SpecialOrderNumber>
                     <Description>Apply pretty green hi-gloss paint</Description>
                     <ExtendedAmount>75.00</ExtendedAmount>
                     <Quantity>1</Quantity>
                  </SaleForPickup>
               </Member>
            </Kit>
            <Pickup>
               <Name>
                  <OfficialName>Mr A Jones</OfficialName>
               </Name>
               <Address>
                  <AddressLine>5001 First Avenue</AddressLine>
                  <City>Albany</City>
                  <Territory>NY</Territory>
               </Address>
               <TelephoneNumber>
                  <AreaCode>(707)</AreaCode>
                  <LocalNumber>123 4567</LocalNumber>
               </TelephoneNumber>
            </Pickup>
         </SaleForPickup>
         <SequenceNumber>1</SequenceNumber>
      </LineItem>
   </RetailTransaction>
</Transaction>
</POSLog>
```

4.3b Alternative Conformance XML Instance Document – Item Purchase for Alteration & Subsequent Pickup

NOTE: Pickup Information is on the transaction while alteration instructions are on the item.

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase for Alteration and Subsequent Pickup    -->
<!-- Note: Addition of InventoryReservation                         -->
<!--       Inclusion of Alteration instructions as part of a Kit    -->
<!--       Pickup data is at transaction header not line item level -->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" FixVersion="0" MinorVersion="0">
   <Transaction>
      <BusinessUnit>
```

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```
      <UnitID>HighStreet</UnitID>
    </BusinessUnit>
    <WorkstationID>POS5</WorkstationID>
    <SequenceNumber>4294967295</SequenceNumber>
    <OperatorID>John</OperatorID>
    <RetailTransaction>
      <LineItem>
        <SaleForPickup ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <ExtendedAmount>375.00</ExtendedAmount>
          <Quantity>1</Quantity>
          <Kit>
            <Member Action="IsPartOf">
              <SaleForPickup ItemType="Alteration">
                <SpecialOrderNumber>AQ-629</SpecialOrderNumber>
                <Description>Apply pretty green hi-gloss paint</Description>
                <ExtendedAmount>75.00</ExtendedAmount>
                <Quantity>1</Quantity>
                <InventoryReservationID>AQ-78</InventoryReservationID>
              </SaleForPickup>
            </Member>
          </Kit>
          <InventoryReservationID>AQ-78</InventoryReservationID>
        </SaleForPickup>
        <SequenceNumber>1</SequenceNumber>
      </LineItem>
      <Total TotalType="TransactionGrossAmount">375.00</Total>
      <Pickup>
        <Name>
          <OfficialName>Mr A Jones</OfficialName>
        </Name>
        <Address>
          <AddressLine>5001 First Avenue</AddressLine>
          <City>Albany</City>
          <Territory>NY</Territory>
        </Address>
        <TelephoneNumber>
          <AreaCode>(707)</AreaCode>
          <LocalNumber>123 4567</LocalNumber>
        </TelephoneNumber>
      </Pickup>
    </RetailTransaction>
  </Transaction>
</POSLog>
```

4.4 Scenario: Item purchase of serialized item (V2.1)

Brief Description

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Customer buys one or more items some of which require that the serial number of the unit sold be recorded.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction.
- Item sale data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold.
  - The unit price for the item being sold.
  - The extended amount (i.e. unit price * the number of items being sold)
  - The serial number of each item being sold

4.4 Conformance XML Instance Document - Item purchase of serialized item

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase of Serialized Item -->
<!-- Note: Addition of multiple SerialNumbers  -->
<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="High Street">6534</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>88</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>326.00</ExtendedAmount>
               <Quantity>2</Quantity>
               <SerialNumber>HU45-3982</SerialNumber>
               <SerialNumber>HU45-3983</SerialNumber>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

4.5 Scenario: Item purchase with part exchange (V2.1)

Brief Description

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Customer purchases an item, such as a car battery, where an accompanying dead battery will reduce the price of the new battery. There is no refundable amount on a dead battery without a corresponding purchase.

Or when buying an appliance like a refrigerator, retailer advertises $100.00 Trade-in on your appliance. Some tax jurisdictions have ruled that the Trade In is tender rather than a discount – to preserve tax base.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item sale data, including:
  - An identifier for the battery being sold.
  - The number batteries being returned.
  - Unit price for the battery.
  - The extended amount (i.e. unit price * the number of batteries being sold)
- Item return data, including:
  - An identifier for the battery being returned.
  - The number batteries being returned.
  - Price reduction on new battery because of dead battery return.
  - The extended amount of the price reduction.

4.5 Conformance XML Instance Document - Item purchase with part exchange

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase with Part Exchange                    -->
<!-- Note: ReturnLineItem for dead batteries, is linked to sale of battery    -->
<!--      Inclusion of Total in transaction header to show reduction of price by return -->
<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="High Street">3453</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>30.00</ExtendedAmount>
               <Quantity>1</Quantity>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
```

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```
        </LineItem>
        <LineItem>
          <Return ItemType="Stock">
            <ItemID>14</ItemID>
            <ExtendedAmount>12.00</ExtendedAmount>
            <Quantity>1</Quantity>
            <ItemLink>1</ItemLink>
            <Disposal Method="ReturnToManufacturer"/>
          </Return>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

4.6 Scenario: Item purchase with quantity pricing (V2.1)

Brief Description

Candy bars are priced at $0.59 each or 2 for $.99. This is not a promotion; this is the normal pricing for the collection of items.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold, and the quantity that applies to the unit-price.
  - The unit-price of the item
  - The extended amount for the items

4.6a Conformance XML Instance Document - Item purchase with quantity pricing

NOTE: Quantity is included in the item with the extended amount showing the total cost of these items

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  UseCase: Item Purchase with Quantity Pricing          -->
<!--  Note: UnitPrice has attribute Quantity to 2 for $0.99 -->
<!--        Quantity=2 denotes we are selling 2 candy bars  -->
<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="High Street">3452</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
```

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```
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>0.99</ExtendedAmount>
               <Quantity>2</Quantity>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
         <LineItem>
            <Tender TenderType="Cash" TypeCode="Sale">
               <Amount>.99</Amount>
            </Tender>
            <SequenceNumber>2</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

4.6bAlternative Conformance XML Instance Document - Item purchase with quantity pricing

NOTE: the explanation on why the quantity pricing

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  UseCase: Item Purchase with Quantity Pricing                                    -->
<!--  Note: Quantity=2, with RetailPriceModifier to denote we are selling with a 19c
discount -->
<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="HighStreet">2342</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>0.99</ExtendedAmount>
               <Quantity>2</Quantity>
               <RetailPriceModifier MethodCode="PriceRule">
```

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```
                <SequenceNumber>1</SequenceNumber>
                <Amount Action="Subtract">0.19</Amount>
                <PreviousPrice>1.18</PreviousPrice>
                <ReasonCode>Mix and Match</ReasonCode>
              </RetailPriceModifier>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
          </LineItem>
          <LineItem>
            <Tender TenderType="Cash" TypeCode="Sale">
              <Amount>.99</Amount>
            </Tender>
            <SequenceNumber>2</SequenceNumber>
          </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

4.7 Scenario: Item purchase of multi-package items (V2.1)

Brief Description

Customer purchases a can of a popular soft drink. The can is scanned into the POS. The UPC code on the can is for both a can and a 6 pack. Some distinction between the single can and the 6-pack must be made.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold.
  - The unit-price of the item
  - The extended amount for the items

4.7a Conformance XML Instance Document - Item purchase of multi-package items

NOTE: The quantity is for each item in the package

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  UseCase: Item Purchase with Multi-Package Items        -->
<!--  Note: Business Rule is that prices are always for units -->
<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="High Street">345</UnitID></BusinessUnit>
```

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```
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>3.06</ExtendedAmount>
               <Quantity>6</Quantity>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
         <LineItem>
            <Tender TenderType="Cash" TypeCode="Sale">
               <Amount>3.06</Amount>
            </Tender>
            <SequenceNumber>2</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

4.7b Alternative Conformance XML Instance Document - Item purchase of multi-package items

NOTE: the quantity is for the 6-pack

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  UseCase: Item Purchase with Multi-Package Items                    -->
<!--  Note: Alternative scheme where a separate price is held for the 6-pack -->
<!--  Price for 6 pack need not be 6*price for single                    -->
<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="High Street">ert543</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
                  <Qualifier>6Pack</Qualifier>
               </POSIdentity>
```

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```
            <ExtendedAmount>2.79</ExtendedAmount>
            <Quantity UnitOfMeasureCode="6Pack">1</Quantity>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
          <Tender TenderType="Cash" TypeCode="Sale">
            <Amount>2.79</Amount>
          </Tender>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
      </RetailTransaction>
    </Transaction>
</POSLog>
```

4.8 Scenario: Item purchase by selling location (V2.1)

Brief Description

Customer purchases an item that is sold in multiple locations within the store. The store wants to track where the item is selling or not selling, and may assign inventory holdings to each selling location. This helps them arrange the items in the store to maximize sales.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item sale data, including:
  - An identifier for the item being sold.
  - Unit price for the battery.
  - The extended amount (i.e. unit price * the number of items being sold)
  - Selling Location for the items

4.8 Conformance XML Instance Document - Item purchase by selling location

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  UseCase: Item Purchase by Selling Location          -->
<!--  Note: Addition of Selling Location rather than ItemID -->
<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="High Street">2345</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
```

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```
        <LineItem>
          <Sale ItemType="Stock">
            <POSIdentity>
              <POSItemID>0123456790123</POSItemID>
            </POSIdentity>
            <ExtendedAmount>12.50</ExtendedAmount>
            <Quantity>1</Quantity>
            <SellingLocation Level="Department">Children shoes</SellingLocation>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
          <Tender TenderType="Cash" TypeCode="Sale">
            <Amount>12.50</Amount>
          </Tender>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
      </RetailTransaction>
    </Transaction>
</POSLog>
```

4.9 Scenario: Item purchase with special order (V2.1)

Brief Description

Customer wants to buy a particular model of computer but wants a different monitor and more RAM.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item sale data, including:
  - An identifier for the standard computer.
  - The number of computers being sold.
  - Unit price for the computer
  - The extended amount (i.e. unit price * the number of computers being sold)
- Modification data, including:
  - An identifier for each item being added to the computer.
  - The amount of each item being added.
  - Unit price for each item being added.
  - The extended amount (i.e. unit price * amount of item * number of computers)
  - Special modification instructions.

4.9a Conformance XML Instance Document - Item purchase with special order

NOTE: the items in the kit are grouped together

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  UseCase: Computer with 19 in Monitor and 128K RAM Upgrades              -->
<!--  Note: Extras treated as AddTos in a kit along with a RetailPriceModifier  -->
```

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```
<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="High Street">345</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John&gt;</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="ItemCollection">
               <POSIdentity>
                  <POSItemID>0123456790123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>999.00</ExtendedAmount>
               <Quantity>1</Quantity>
               <RetailPriceModifier MethodCode="PriceRule">
                  <SequenceNumber>1</SequenceNumber>
                  <Amount Action="Add">50.00</Amount>
                  <PreviousPrice>899.00</PreviousPrice>
                  <ReasonCode>19 inch Monitor Upgrade</ReasonCode>
               </RetailPriceModifier>
               <RetailPriceModifier MethodCode="PriceRule">
                  <SequenceNumber>2</SequenceNumber>
                  <Amount Action="Add">50.00</Amount>
                  <PreviousPrice>945.00</PreviousPrice>
                  <ReasonCode>128K RAM Upgrade</ReasonCode>
               </RetailPriceModifier>
               <Kit>
                  <Member Action="AddsTo">
                     <Sale ItemType="Stock">
                        <POSIdentity POSIDType="GTIN">
                           <POSItemID>01234567890123</POSItemID>
                        </POSIdentity>
                        <ExtendedAmount>50.00</ExtendedAmount>
                        <Quantity>1</Quantity>
                     </Sale>
                  </Member>
                  <Member Action="AddsTo">
                     <Sale ItemType="Stock">
                        <POSIdentity POSIDType="GTIN">
                           <POSItemID>01234567890666</POSItemID>
                        </POSIdentity>
                        <ExtendedAmount>50.00</ExtendedAmount>
                        <Quantity>1</Quantity>
                     </Sale>
                  </Member>
               </Kit>
            </Sale>
```

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```
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
         <LineItem>
            <Tender TenderType="Cash" TypeCode="Sale">
               <Amount>999.00</Amount>
            </Tender>
            <SequenceNumber>2</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

4.9b Alternative Conformance XML Instance Document - Item purchase with special order

NOTE: the items in the kit are listed separately and linked together – the above is the preferred method

```
<?xml version="1.0" encoding="UTF-8" ?>
<!--  UseCase: Computer with 19 in Monitor and 128K RAM Upgrades     -->
<!--  Note: Extras treated as sales of completely separate items     -->
<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="High Street">234</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John&gt;</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>0123456790123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>899.00</ExtendedAmount>
               <Quantity>1</Quantity>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
         <LineItem>
            <!--19inch Monitor upgrade -->
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>0123456790444</POSItemID>
               </POSIdentity>
               <ExtendedAmount>50.00</ExtendedAmount>
               <Quantity>1</Quantity>
```

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```
            <ItemLink>1</ItemLink>
          </Sale>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
        <LineItem>
          <!--128K RAM Upgrade -->
          <Sale ItemType="Stock">
            <POSIdentity>
              <POSItemID>0123456790666</POSItemID>
            </POSIdentity>
            <ExtendedAmount>50.00</ExtendedAmount>
            <Quantity>1</Quantity>
            <ItemLink>1</ItemLink>
          </Sale>
          <SequenceNumber>3</SequenceNumber>
        </LineItem>
        <LineItem>
          <Tender TenderType="Cash" TypeCode="Sale">
            <Amount>999.00</Amount>
          </Tender>
          <SequenceNumber>4</SequenceNumber>
        </LineItem>
      </RetailTransaction>
    </Transaction>
</POSLog>
```

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5. USE CASE: FEES

5.1 Miscellaneous Fee (V6.0)

Brief Description
Whenever there is a fee associated with an item, POSLog records the fee as a separate sale line item and links it to the line item where the fee applies.

Scenario Description
Suzy takes 1000 pictures in to have them printed for $.25 each. She is going to visit her grandmother so she needs them immediately. Because of the priority there is an additional processing fee of $5.00.

Data
Sale = ItemType = “Fee”

Line Item – Item Link

5.1 Conformance XML Instance Document – Miscellaneous Fee

```
<?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="High Street">234234</UnitID>
      </BusinessUnit>
      <WorkstationID>Register 2</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <POSLogDateTime>2001-08-13T08:05:00</POSLogDateTime>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>100.00</ExtendedAmount>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
         <LineItem>
            <Sale ItemType="Fee">
               <POSIdentity>
                  <POSItemID>asdfasdf</POSItemID>
               </POSIdentity>
```

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```
            <ExtendedAmount>10.00</ExtendedAmount>
            <ItemLink>1</ItemLink>
          </Sale>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
        <LineItem>
          <Tender TypeCode="Refund">
            <Amount>90.00</Amount>
          </Tender>
          <SequenceNumber>3</SequenceNumber>
        </LineItem>
      </RetailTransaction>
    </Transaction>
</POSLog>
```

5.2 Scenario: Multiple Shipping Charges (V2.2)

Brief Description
In the case where items in a transaction may be shipped from two different locations, POSLog will record two shipping charges each linked to the appropriate line item.
Scenario Description
Suzy ordered a lawn furniture kit where part was shipped from one location and part was shipped from another location. There is a shipping fee for each furniture kit shipment.

Data
Kit with different members defined for every part that is shipped separately.

Shipping charges tied to item (member) in kit

5.2 Conformance XML Instance Document - Multiple Shipping Charges

```
<?xml version="1.0" encoding="UTF-8"?>
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd" MajorVersion="6" MinorVersion="0" FixVersion="0">
    <Transaction>
        <BusinessUnit>
            <UnitID>High Street</UnitID>
        </BusinessUnit>
        <WorkstationID>Register 2</WorkstationID>
        <SequenceNumber>4294967295</SequenceNumber>
        <POSLogDateTime>2001-08-13T08:05:00</POSLogDateTime>
        <OperatorID>John</OperatorID>
        <RetailTransaction>
            <LineItem>
                <SaleForDelivery ItemType="Stock">
                    <POSIdentity>
                        <POSItemID>01234567890123</POSItemID>
                    </POSIdentity>
```

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```
                    <ExtendedAmount>489.00</ExtendedAmount>
                    <Quantity>3</Quantity>
                    <Kit>
                        <Member Action="IsPartOf">
                            <SaleForDelivery>
                                <POSIdentity>
                                    <POSItemID>2134asdf</POSItemID>
                                </POSIdentity>
                                <ExtendedAmount>0.00</ExtendedAmount>
                                <Delivery>
                                    <ShippingFee>8.00</ShippingFee>
                                </Delivery>
                            </SaleForDelivery>
                        </Member>
                        <Member Action="IsPartOf">
                            <SaleForDelivery>
                                <POSIdentity>
                                    <POSItemID>asdfasdfasdf</POSItemID>
                                </POSIdentity>
                                <ExtendedAmount>0.00</ExtendedAmount>
                                <Delivery>
                                    <ShippingFee>10.00</ShippingFee>
                                </Delivery>
                            </SaleForDelivery>
                        </Member>
                    </Kit>
                    <Delivery>
                        <Name>
                            <Name>Jones</Name>
                        </Name>
                        <Address>
                            <AddressLine>325 7th St. NW.</AddressLine>
                            <AddressLine>Suite 1100</AddressLine>
                            <City>Washington</City>
                            <Territory>D.C.</Territory>
                        </Address>
                        <TelephoneNumber>
                            <AreaCode>610</AreaCode>
                            <LocalNumber>555-4793</LocalNumber>
                        </TelephoneNumber>
                    </Delivery>
                </SaleForDelivery>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

5.3 Scenario: Restocking fee (V2.2)

Brief Description

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Richard returns an automotive generator and pays a restocking fee.
NOTE: Restocking fee is a separate line item because of possible tax implications

Data

- Item Return
- Restocking fee

5.3 Conformance XML Instance Document – Restocking Fee

```
<?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="High Street">234234</UnitID>
        </BusinessUnit>
        <WorkstationID>Register 2</WorkstationID>
        <SequenceNumber>4294967295</SequenceNumber>
        <POSLogDateTime>2001-08-13T08:05:00</POSLogDateTime>
        <OperatorID>John</OperatorID>
        <RetailTransaction>
            <LineItem>
                <Return ItemType="Stock">
                    <POSIdentity>
                        <POSItemID>01234567890123</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>100.00</ExtendedAmount>
                </Return>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Return ItemType="Fee" ItemSubType="Restock">
                    <POSIdentity>
                        <POSItemID>asdfasdf</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>10.00</ExtendedAmount>
                </Return>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender TypeCode="Refund">
                    <Amount>90.00</Amount>
                </Tender>
                <SequenceNumber>3</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

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6. USE CASE: One Retail Transaction Referencing Multiple Customer Order Transactions (V6.0)

6.1 Scenario: One Retail Transaction Referencing Multiple Customer Order Transactions (V6.0)

Brief Description
Items, such as different foods from the deli, may each create a separate customer order transaction. These orders should all be able to be scanned in to one retail transaction and paid for in total. All the separate orders should still be trackable.

Scenario Description
Bill goes to the fish counter and orders a small bowl of fish salad. The employee weighs the fish salad, puts it into a bag and clips a barcode on the bag. Bill then goes to the cheese counter and orders two slices of Edam cheese and a small portion of cream cheese. The employee weighs those items, puts them into a different bag and clips a barcode on the bag. On his way to the checkout Bill also grabs a bottle of water in order to complete his meal.
At the checkout he presents the two bags and the bottle.

Assumption

Pre-Conditions

Post-Conditions

Data
For each customer order transaction taken over into the retail transaction:

- ReasonCode = “Resume”
- EntryMethod = “Scanned”
- Identification of the customer order including
  - TransactionID
- Date and time when the customer order transaction was created
- Date and time when the customer order transaction was finished
- Line Item – Sale - Transaction Link – to the requisite transaction

6.1 Conformance XML Instance Document – Linked Customer Order Transactions to one Retail Transaction

```
<?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>
```

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```
<BusinessUnit>
    <UnitID Name="High Street">234234</UnitID>
</BusinessUnit>
<WorkstationID>Register 2</WorkstationID>
<SequenceNumber>4294967295</SequenceNumber>
<POSLogDateTime>2001-08-13T08:05:00</POSLogDateTime>
<OperatorID>John</OperatorID>
<RetailTransaction>
    <LineItem>
        <Sale ItemType="Stock">
            <!-- Bottle of Water -->
            <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
            </POSIdentity>
            <ExtendedAmount>1.00</ExtendedAmount>
        </Sale>
        <SequenceNumber>1</SequenceNumber>
    </LineItem>
    <LineItem>
        <Sale ItemType="Stock">
            <!-- Fish Salad -->
            <POSIdentity>
                <POSItemID>asdfasdf</POSItemID>
            </POSIdentity>
            <ExtendedAmount>10.00</ExtendedAmount>
            <!-- Link to the customer order transaction -->
            <TransactionLink>
                <TransactionID>2345</TransactionID>
            </TransactionLink>
        </Sale>
        <SequenceNumber>2</SequenceNumber>
    </LineItem>
    <LineItem>
        <Sale ItemType="Stock">
            <!-- Edam Cheese -->
            <POSIdentity>
                <POSItemID>345345</POSItemID>
            </POSIdentity>
            <ExtendedAmount>5.45</ExtendedAmount>
            <TransactionLink>
                <TransactionID>456234</TransactionID>
            </TransactionLink>
        </Sale>
        <SequenceNumber>3</SequenceNumber>
    </LineItem>
    <LineItem>
        <Tender>
            <Amount>16.45</Amount>
        </Tender>
        <SequenceNumber>4</SequenceNumber>
    </LineItem>
```

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```
        </RetailTransaction>
    </Transaction>
</POSLog>
```

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7. Use Case: Required age to purchase item (V6.0)

Brief Description
We tie the age restriction it to the individual items because in self-checkout they scan all items then may go to a pay station to have their age verified. If the validation fails (like they didn't bring their ID with them) the system tells the cashier which items to remove from their bag. Or, if the customer is trying to cheat the system, there are some items they can buy when they're 18 and some when they are 21 so if they are 20, they can keep the items that require you to be 18, but not the ones that require you to be 21 so those are the ones that are indicated to be removed from their bag.

7.1 Scenario: Items are being scanned at a self-checkout device and at a pay station the age verification is done. (V6.0)

Brief Description
If the customer is old enough for some items, but not for others, the required age will be used at the pay station to determine which items need to be removed from the order.

Scenario Description
Sam rings up cigarettes and beer at the self-checkout. When he goes to the pay station to pay, they verify his age and he is only old enough to buy the cigarettes.

Data

- Line item
  - Amount
  - Line Item - Required Age to purchase (Restriction Validation with link to rule)

7.1 ARTS XML Conformance XML Instance Document – Self Scan Age Verification:

```
<?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="High Street">234234</UnitID>
      </BusinessUnit>
      <WorkstationID>Register 2</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <POSLogDateTime>2001-08-13T08:05:00</POSLogDateTime>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem RefusalTypeCode="AgeRestriction">
            <Sale ItemType="Stock">
```

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```
            <!-- Beer -->
            <POSIdentity>
               <POSItemID>01234567890123</POSItemID>
            </POSIdentity>
            <ExtendedAmount>1.00</ExtendedAmount>
         </Sale>
         <SequenceNumber>1</SequenceNumber>
      </LineItem>
      <LineItem>
         <Sale ItemType="Stock">
            <!-- Cigarette -->
            <POSIdentity>
               <POSItemID>asdfasdf</POSItemID>
            </POSIdentity>
            <ExtendedAmount>10.00</ExtendedAmount>
         </Sale>
         <SequenceNumber>2</SequenceNumber>
         <RestrictionValidation CustomerQuestionID="CustomerID">
            <QuestionAnswer>123</QuestionAnswer>
         </RestrictionValidation>
      </LineItem>
      <LineItem>
         <Tender>
            <Amount>11.00</Amount>
         </Tender>
         <SequenceNumber>3</SequenceNumber>
      </LineItem>
   </RetailTransaction>
</Transaction>
</POSLog>
```

7.2 Scenario: Purchase of a gun and alcohol (V6.0)

Brief Description
One comes in to buy a gun and alcohol. The alcohol can be bought at 18 but the gun can only be bought if the customer is over 21.

The Sales Restriction Validation ties the validation of the sales restriction to the rule which initiates the validation to either the transaction or line item.

Scenario Description
Sam rings up a gun and beer at the self-checkout. When he goes to the pay station to pay, they verify his age.

Data

- Line item
  - Amount

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- Required Age to purchase

7.2 ARTS XML Conformance XML Instance Document – Multiple Age Restrictions

```
<?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="High Street">234234</UnitID>
      </BusinessUnit>
      <WorkstationID>Register 2</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <POSLogDateTime>2001-08-13T08:05:00</POSLogDateTime>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <!-- gun -->
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>250.00</ExtendedAmount>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
            <!-- Old enough -->
            <RestrictionValidation CustomerQuestionID="CustomerID">
               <QuestionAnswer>123</QuestionAnswer>
               <SalesRestrictionValidation ValidationFlag="true"/>
            </RestrictionValidation>
         </LineItem>
         <LineItem>
            <Sale ItemType="Stock">
               <!-- Beer -->
               <POSIdentity>
                  <POSItemID>asdfasdf</POSItemID>
               </POSIdentity>
               <ExtendedAmount>10.00</ExtendedAmount>
            </Sale>
            <SequenceNumber>2</SequenceNumber>
            <!-- Old Enough -->
            <RestrictionValidation CustomerQuestionID="CustomerBirthDate">
               <QuestionAnswer>June 6</QuestionAnswer>
               <SalesRestrictionValidation ValidationFlag="true"/>
            </RestrictionValidation>
         </LineItem>
         <LineItem>
```

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```
            <Tender>
               <Amount>260.00</Amount>
            </Tender>
            <SequenceNumber>3</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

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8. Use Case: Mix & Match

Mix & Match (both sale/return and promotion)

Mix & Match is a discount process as a part of promotion. When the specific combination of items is purchased, they are specially discounted by Mix & Match. Most Japanese retail sellers discount each item applied to Mix & Match. Also the situation applicable to Mix & Match is recorded into the POSLog, which will be used for analyzing the effect of Mix & Match.

8.1 Scenario: Transaction Applicable to Mix & Match (V2.2)

Brief Description

The operator scans items, registers them, and performs a subtotal operation. The POS terminal checks if Mix & Match is applicable, if so, Mix & Match operation is performed automatically. The two types of the applications check the condition of Mix & Match. One checks so at each item entry, and the other does at the subtotal. The difference between these applications is beyond the scope of this document. The POS terminal stores the completed Mix & Match information into the POSLog. The deduction information divided by item is also stored in the POSLog.

Example

Applicable item	Unit price
Tofu	100
Miso	250

Programmed Mix & Match

Promotion name	Tofu Miso Soup
Mix & Match ID	1
Condition	When purchasing both Tofu and Miso, the amount total 350 yen is reduced to 300 yen.

Purchasing two packs of Tofu and one Miso satisfies the condition of Mix & Match.

Deduction information

No.	Item	Price	Deduction		Amount
1	Tofu	100			100
2	Tofu	100	-14	= 50 x 100 / (100 + 250)	86
3	Miso	250	-36	= 50 x 250 / (100 + 250)	214
				Total	400

Completed Mix & Match information

Completed Mix & Match	
ID	1
Amount	350
Deduction	50

The information above will be stored into the POSLog. The information on the left is Deduction information, and that on the right is Completed Mix & Match information.

Data

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The Mix & Match information is composed of Deduction information and Completed Mix & Match information.

- RetailTransactionItem
  - This data indicates Deduction information.
- POSLogRetailTransaction
  - This data indicates Completed Mix & Match information.

8.1 Conformance XML Instance Document – Transaction Aplicable to Mix & Match

```
<?xml version="1.0" encoding="UTF-8"?>
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
    MajorVersion="6" MinorVersion="0" FixVersion="0">
    <Transaction>
        <BusinessUnit>
            <UnitID>RetailStoreID</UnitID>
        </BusinessUnit>
        <WorkstationID>WorkstationID</WorkstationID>
        <SequenceNumber>2839182</SequenceNumber>
        <OperatorID>2</OperatorID>
        <RetailTransaction>
            <LineItem>
                <Sale ItemType="Stock">
                    <POSIdentity>
                        <POSItemID>1928391829</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>100</ExtendedAmount>
                </Sale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Sale ItemType="Stock">
                    <POSIdentity>
                        <POSItemID>1928391829</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>86</ExtendedAmount>
                    <RetailPriceModifier MethodCode="Promotion">
                        <SequenceNumber>1</SequenceNumber>
                        <Amount Action="Subtract">14</Amount>
                        <PreviousPrice>100</PreviousPrice>
                        <PriceDerivationRule>
                            <PriceDerivationRuleID>1</PriceDerivationRuleID>
                        </PriceDerivationRule>
                    </RetailPriceModifier>
                </Sale>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
            <LineItem>
```

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```
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>1829381928</POSItemID>
               </POSIdentity>
               <ExtendedAmount>214</ExtendedAmount>
               <RetailPriceModifier MethodCode="Promotion">
                  <SequenceNumber>1</SequenceNumber>
                  <Amount Action="Subtract">36</Amount>
                  <PreviousPrice>250</PreviousPrice>
                  <PriceDerivationRule>
                     <PriceDerivationRuleID>1</PriceDerivationRuleID>
                  </PriceDerivationRule>
               </RetailPriceModifier>
            </Sale>
            <SequenceNumber>3</SequenceNumber>
         </LineItem>
         <PriceDerivationResult MethodCode="Promotion">
            <SequenceNumber>1</SequenceNumber>
            <Amount Action="Subtract">50</Amount>
            <PreviousPrice>350</PreviousPrice>
            <PriceDerivationRule>
               <PriceDerivationRuleID>1</PriceDerivationRuleID>
            </PriceDerivationRule>
         </PriceDerivationResult>
      </RetailTransaction>
      <TillID>1</TillID>
      <BusinessDayDate>2004-01-21</BusinessDayDate>
   </Transaction>
</POSLog>
```

8.2 Scenario: Mix-Match Normal Price (V2.2)

Brief Description

Candy bars are normally $.59 each but you can buy 2 for $.99. This is not a promotion. This can be the normal pricing for the collection of items, i.e. the store may always price the items at 2 for the price of 1.

Data

- POS Item Identity which identifies this as a mix match price
- Kit which allows multiple different candy bars to be related to one normal price

8.2 Conformance XML Instance Document –Mix-Match Normal Price

```
<?xml version="1.0" encoding="UTF-8"?>
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" MinorVersion="0" FixVersion="0">
   <Transaction>
```

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```
        <BusinessUnit>
            <UnitID>HighStreet</UnitID>
        </BusinessUnit>
        <WorkstationID>POS5</WorkstationID>
        <SequenceNumber>4294967295</SequenceNumber>
        <OperatorID>John</OperatorID>
        <RetailTransaction>
            <LineItem>
                <Sale ItemType="Stock">
                    <POSIdentity>
                        <!-- the company assigned number indicates this is a mix-match
normal pricing -->
                        <POSItemID>01234567890123</POSItemID>
                    </POSIdentity>
                    <!-- mix-match normal price for kit -->
                    <ExtendedAmount>.99</ExtendedAmount>
                    <Kit>
                        <Member>
                            <Sale>
                                <POSIdentity>
                                    <!-- id for one of the candy bars -->
                                    <POSItemID>21341234</POSItemID>
                                </POSIdentity>
                                <!-- normal single price for candy bar -->
                                <ExtendedAmount>.59</ExtendedAmount>
                            </Sale>
                        </Member>
                        <Member>
                            <Sale>
                                <POSIdentity>
                                    <!-- id for the other candy bar -->
                                    <POSItemID>431432</POSItemID>
                                </POSIdentity>
                                <!-- normal single price for candy bar -->
                                <ExtendedAmount>.59</ExtendedAmount>
                            </Sale>
                        </Member>
                    </Kit>
                </Sale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

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9. USE CASE: Merchandise Hierarchy

9.1 Scenario: Item Purchase from Category (V6.0)

Brief Description
Customer purchases items in a particular merchandise hierarchy.

Scenario Description
Ralph purchases a soft drink for $2.79

Data

9.1 ARTS XML Conformance XML Instance Document – Item Purchase from Category

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  UseCase: Item Purchase with Multi-Package Items            -->
<!--  Note: no ItemID; Merchandise Hierarchy use to identify item  -->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" FixVersion="0" MinorVersion="0">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <MerchandiseHierarchy Level="Department">Soft
Drinks</MerchandiseHierarchy>
               <ExtendedAmount>2.79</ExtendedAmount>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
         <LineItem>
            <Tender TenderType="Cash" TypeCode="Sale">
               <Amount>2.79</Amount>
            </Tender>
            <SequenceNumber>2</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

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9.2 Scenario: Item purchase via open department (V2.1)

Brief Description

An item is manually entered into the POS without scanning because the item doesn't scan or it isn't setup in the POS. Item information is not entered, but some generic item classification of MerchandiseHierarchy is entered with a dollar amount instead.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item data, including:
  - A department identifier for the item being sold.
  - Which level in the department hierarchy is being used to identify the item.
  - The number of multiples of the item being sold.
  - The unit-price of the item
  - The extended amount for the items being sold.

9.2 Conformance XML Instance Document - Item purchase via open department

```
<?xml version="1.0" encoding="UTF-8"?>
<!--  UseCase: Item Purchase with Multi-Package Items            -->
<!--  Note: no ItemID; Merchandise Hierarchy use to identify item  -->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" FixVersion="0" MinorVersion="0">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <MerchandiseHierarchy Level="Department">Soft
Drinks</MerchandiseHierarchy>
               <ExtendedAmount>2.79</ExtendedAmount>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
         <LineItem>
            <Tender TenderType="Cash" TypeCode="Sale">
               <Amount>2.79</Amount>
            </Tender>
            <SequenceNumber>2</SequenceNumber>
         </LineItem>
```

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```
      </RetailTransaction>
   </Transaction>
</POSLog>
```

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10. Use Case: Item purchase of kit/combo/Collection items

For some retailers an item may actually be a Kit, Combination or Collection of other items, e.g. a garden furniture set may comprise a table, four chairs and a sun umbrella. Some retailers may allow some items in some kit items to be substituted; others may not.

10.1 Scenario: Kit Recursion (V6.0)

Brief Description
It is possible to build a Kit/Combo with items whose values are dependent upon how they are entered. For example a kit can contain a drink, chips and a sandwich. The sandwich can be sold by weight. The combo is entered as one combo with multiple line items each with their own entry method

Scenario Description
Fred buys a combo that consists of a 12 oz. drink, a bag of potato chips and a 6.3 oz. sandwich. The drink was keyed in, the potato chips were scanned and the sandwich was a menu option.

Data
Add Entry Method to each line item

10.1 Conformance XML Instance Document – Kit Recursion

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase of Kit/Combo/Collection item        -->
<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="High street">sdf2234</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="ItemCollection">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <!-- Combo -->
               <ExtendedAmount>2.99</ExtendedAmount>
               <Combo>
                  <!-- 12 oz drink -->
                  <Member EntryMethod="Keyed">
                     <Sale>
                        <ItemID>123</ItemID>
```

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```
            </Sale>
          </Member>
          <!-- bag of potato chips -->
          <Member EntryMethod="Scanned">
            <Sale>
              <ItemID>08098</ItemID>
            </Sale>
          </Member>
          <!-- 6.3 oz sandwich -->
          <Member EntryMethod="Weighed">
            <Sale>
              <ItemID>asdf345</ItemID>
              <Quantity Units="1.0" UnitOfMeasureCode="Oz">6.3</Quantity>
            </Sale>
          </Member>
        </Combo>
      </Sale>
      <SequenceNumber>1</SequenceNumber>
    </LineItem>
    <LineItem>
      <Tender>
        <Amount>2.99</Amount>
      </Tender>
    </LineItem>
  </RetailTransaction>
 </Transaction>
</POSLog>
```

10.2 Scenario Kit/Combo/Collection Purchase Without Substitution (V2.1)

Brief Description

Customer buys a kit of garden furniture comprising a table, four chairs and a sun umbrella. The POS sells this kit as if it was a single item, and no substitutions are permitted.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item sale data, including:
  - An identifier for the kit item being sold.
  - The number of multiples of the kit item being sold.
  - Unit price for the kit item being sold.
  - The extended amount (i.e. Unit price * the number of items being sold)

10.2a Conformance XML Instance Document - Kit/Combo/Collection Purchase Without Substitution

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase of Kit/Combo/Collection item        -->
```

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```
<!-- Note: Individual Kit/Combo/Collection members are not listed -->
<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="High street">sdf2234</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="ItemCollection">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <!-- Patio Furniture Set -->
               <ExtendedAmount>299.00</ExtendedAmount>
               <Quantity>1</Quantity>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

10.2b Alternative Conformance XML Instance Document - Kit/Combo/Collection Purchase Without Substitution

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase of Kit/Combo/Collection Item without substitution          --
>
<!-- Note: Individual Collection members are listed, even though there is no substitution -
->
<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="High Street">345</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="ItemCollection">
```

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```
            <POSIdentity>
               <POSItemID>01234567890123</POSItemID>
            </POSIdentity>
            <Description>Patio Furniture Set</Description>
            <RegularSalesUnitPrice>299.00</RegularSalesUnitPrice>
            <ActualSalesUnitPrice>299.00</ActualSalesUnitPrice>
            <ExtendedAmount>299.00</ExtendedAmount>
            <Quantity>1</Quantity>
            <Kit>
               <Member Action="IsPartOf">
                  <Sale ItemType="Stock">
                     <POSIdentity POSIDType="GTIN">
                        <POSItemID>01234567890123</POSItemID>
                     </POSIdentity>
                     <!-- Patio Table -->
                     <ExtendedAmount>215.00</ExtendedAmount>
                     <Quantity>1</Quantity>
                  </Sale>
               </Member>
               <Member Action="IsPartOf">
                  <Sale ItemType="Stock">
                     <POSIdentity POSIDType="GTIN">
                        <POSItemID>01234567890323</POSItemID>
                     </POSIdentity>
                     <!-- Patio Chair -->
                     <ExtendedAmount>84.00</ExtendedAmount>
                     <Quantity>4</Quantity>
                  </Sale>
               </Member>
            </Kit>
         </Sale>
         <SequenceNumber>1</SequenceNumber>
      </LineItem>
   </RetailTransaction>
</Transaction>
</POSLog>
```

10.3 Scenario: Kit/Combo/Collection Purchase with Substitution (V2.1)

Brief Description

Customer buys a kit of garden furniture set but wants to replace the sun umbrella with another brand of equal value. The system removes one brand of sun umbrella from the kit and adds the desired brand of sun umbrella to the kit.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item sale data, including:
  - An identifier for the kit item being sold.

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- The number of multiples of the kit item being sold.
- The normal unit price for the kit item being sold.
- The actual unit price for the kit item, after substitutions have been applied.
- The extended amount (i.e. Unit price * the number of items being sold)

- Substitution data, including:
  - An identifier for the item being removed from the kit item.
  - A count of how many of those items is being removed from the kit item.
  - The monetary amount the item being removed contributes to the kit price.
  - An identifier for the item being added to the kit item.
  - A count of how many of those items is being added to the kit item.
  - The monetary amount the item being added is contributing to the kit price.

10.3 Conformance XML Instance Document - Kit/Combo/Collection Purchase With Substitution

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase of Kit/Combo/Collection item                    --
>
<!-- Note: Individual kit members are listed, even substituted items        -->
<!--       Modification includes what was removed, added, value in kit of substituted item -
->
<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="High Street">2342asd</UnitID></BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="ItemCollection">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <!-- Outdoor Furniture -->
               <!-- Patio Furniture Set -->
               <ExtendedAmount>309.00</ExtendedAmount>
               <Quantity>1</Quantity>
               <RetailPriceModifier MethodCode="PriceRule">
                  <SequenceNumber>1</SequenceNumber>
                  <Amount Action="Add">10.00</Amount>
                  <PreviousPrice>299.00</PreviousPrice>
                  <ReasonCode>KitSubstitution</ReasonCode>
               </RetailPriceModifier>
               <Kit>
                  <Member Action="IsPartOf">
                     <Sale ItemType="Stock">
                        <POSIdentity POSIDType="GTIN">
```

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```
                        <POSItemID>01234567890123</POSItemID>
                    </POSIdentity>
                    <!-- Patio Table -->
                    <ExtendedAmount>155.05</ExtendedAmount>
                    <Quantity>1</Quantity>
                </Sale>
            </Member>
            <Member Action="IsPartOf">
                <Sale ItemType="Stock">
                    <POSIdentity POSIDType="GTIN">
                        <POSItemID>01234567890323</POSItemID>
                    </POSIdentity>
                    <!-- Patio Chair -->
                    <ExtendedAmount>84.00</ExtendedAmount>
                    <Quantity>4</Quantity>
                </Sale>
            </Member>
            <Member Action="IsRemovedFrom">
                <Sale ItemType="Stock">
                    <POSIdentity POSIDType="GTIN">
                        <POSItemID>01234567890321</POSItemID>
                    </POSIdentity>
                    <!-- Patio Umbrella (plain) -->
                    <ExtendedAmount>59.95</ExtendedAmount>
                    <Quantity>1</Quantity>
                </Sale>
            </Member>
            <Member Action="AddsTo">
                <Sale ItemType="Stock">
                    <POSIdentity POSIDType="GTIN">
                        <POSItemID>01234567890444</POSItemID>
                    </POSIdentity>
                    <!-- Patio Umbrella (fancy) -->
                    <ExtendedAmount>69.95</ExtendedAmount>
                    <Quantity>1</Quantity>
                </Sale>
            </Member>
        </Kit>
    </Sale>
    <SequenceNumber>1</SequenceNumber>
  </LineItem>
 </RetailTransaction>
</Transaction>
</POSLog>
```

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11. Use Case: Item purchase with manual price override

Brief Description
Items can have their prices overridden for a variety of reasons. The scenarios in this use-case show a number of examples, and attempt to show that the form of the resultant XML does not vary very much. All the scenarios in this use-case make use of the same set of actors and system interaction diagram.

Explain Override Flag (V6.0)
The Override Flag is used to signal that components of this transaction were manually entered by overriding the normal entry methods used by the POS.
It can be things like an item whose price is not in the system or an item which is missing the UPC code and needs a manual choice. Depending on the store rules, it may require a manager to approve the override.

11.1 Scenario: Open PLU (Unpriced Item) (V2.1)

Brief Description
Customer purchases an item that is recognized by the POS but does not have a price in the system. Although the cashier will perform a manual price override, it may not require any special approval because the item doesn't have a price in the system.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold.
  - The unit-price of the item
  - The extended amount for the items
- Price modification data, including:
  - The actual price charged for the items.
  - An indication that the price change was entered manually.
  - The extended amount for the items being sold.

11.1 Conformance XML Instance Document - Open PLU (Unpriced Item)

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase with Manual Price Override Flow: Open (zero priced) item -
->
<!-- Note:  Zero regular price.                                          -->
<!--       RetailPriceModifier with ZeroPrice reason code.                    -->
<!--       No OperatorByPassApproval required for price override on zero price.    -->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MinorVersion="0" MajorVersion="6" FixVersion="0">
   <Transaction>
      <BusinessUnit>
```

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```
      <UnitID>HighStreet</UnitID>
    </BusinessUnit>
    <WorkstationID>POS5</WorkstationID>
    <SequenceNumber>4294967295</SequenceNumber>
    <OperatorID>John</OperatorID>
    <RetailTransaction>
      <LineItem>
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <ExtendedAmount>49.50</ExtendedAmount>
          <Quantity>1</Quantity>
          <RetailPriceModifier MethodCode="PriceOverride">
            <SequenceNumber>1</SequenceNumber>
            <Amount Action="Replace">49.50</Amount>
            <PreviousPrice>0.00</PreviousPrice>
            <ReasonCode>ZeroPrice</ReasonCode>
          </RetailPriceModifier>
        </Sale>
        <SequenceNumber>1</SequenceNumber>
      </LineItem>
    </RetailTransaction>
  </Transaction>
</POSLog>
```

11.2 Scenario: Customer Complaint About Price (V2.1)

Brief Description

Customer complains about the cost of an item, compared to the price at some competitor. The manager gives the customer a discount on the price of the item, to match the competitor price.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold.
  - The unit-price of the item
  - The extended amount for the items
- Price modification data, including:
  - The actual price charged for the items.
  - A reason code denoting that the price change is due to matching competitor price.
  - Approval information identifying the manager who overrode the price.

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11.2 Conformance XML Instance Document - Customer Complaint About Price

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase with Price Override Flow: Customer Complaint -->
<!-- Note:  RetailPriceModifier with MatchCompetitor reason code.       -->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" MinorVersion="0" FixVersion="0">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>10.99</ExtendedAmount>
               <Quantity>1</Quantity>
               <RetailPriceModifier MethodCode="PriceOverride">
                  <SequenceNumber>1</SequenceNumber>
                  <Amount Action="Replace">10.99</Amount>
                  <PreviousPrice>12.99</PreviousPrice>
                  <ReasonCode>MatchCompetitor</ReasonCode>
                  <OperatorBypassApproval>
                     <SequenceNumber>1</SequenceNumber>
                     <ApproverID>45763</ApproverID>
                     <LineApprovalCode>AA</LineApprovalCode>
                  </OperatorBypassApproval>
               </RetailPriceModifier>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

11.3 Scenario: Different Tag Price (V2.1)

Brief Description

An item is scanned at $12.99, but the item price tag says the item is sold for $10.99. The POS is overridden and the price is entered for $10.99

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.

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    - The date the transaction was performed
    - A workstation assigned sequence number identifying the transaction
- Item data, including:
    - An identifier for the item being sold.
    - The number of multiples of the item being sold.
    - The unit-price of the item
    - The extended amount for the items
- Price modification data, including:
    - The actual price charged for the items.
    - A reason code denoting that the price change is due to incorrect item tag.
    - Approval information identifying the manager who overrode the price.
    - The extended amount for the items being sold.

11.3 Conformance XML Instance Document - Different Tag Price

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase with Price Override Flow: Different Tag Price -->
<!-- Note:  RetailPriceModifier with TagPrice reason code.              -->
<!--       RetailPriceModifier applies to the per-unit retail price     -->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" MinorVersion="0" FixVersion="0">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>25.50</ExtendedAmount>
               <Quantity>3</Quantity>
               <RetailPriceModifier MethodCode="PriceOverride">
                  <SequenceNumber>1</SequenceNumber>
                  <Amount Action="Replace">8.50</Amount>
                  <PreviousPrice>12.99</PreviousPrice>
                  <ReasonCode>TagPrice</ReasonCode>
                  <OperatorBypassApproval>
                     <SequenceNumber>1</SequenceNumber>
                     <ApproverID>45763</ApproverID>
                     <LineApprovalCode>AA</LineApprovalCode>
                  </OperatorBypassApproval>
               </RetailPriceModifier>
            </Sale>
```

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```
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

11.4 Scenario: Manager Complimentary (V2.1)

Brief Description
The customer has a problem with their order. The manager gives them a complimentary scarf to make things better.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold.
  - The unit-price of the item
  - The extended amount for the items
- Price modification data, including:
  - The actual price charged for the items.
  - A reason code denoting that the price change is due to incorrect item tag.
  - Approval information identifying the manager who overrode the price.

11.4 Conformance XML Instance Document - Manager Complimentary

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase with Manual Price Override Flow: Manager Complimentary
-->
<!-- Note:  RetailPriceModifier with 100% Discount and ManagerComp reason code.
-->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" MinorVersion="0" FixVersion="0">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
```

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```
            </POSIdentity>
            <ExtendedAmount>0.00</ExtendedAmount>
            <Quantity>1</Quantity>
            <RetailPriceModifier MethodCode="PriceOverride">
               <SequenceNumber>1</SequenceNumber>
               <Amount Action="Subtract">495.00</Amount>
               <PreviousPrice>495.00</PreviousPrice>
               <ReasonCode>ManagerComp</ReasonCode>
               <OperatorBypassApproval>
                  <SequenceNumber>1</SequenceNumber>
                  <ApproverID>45763</ApproverID>
                  <LineApprovalCode>AA</LineApprovalCode>
               </OperatorBypassApproval>
            </RetailPriceModifier>
         </Sale>
         <SequenceNumber>1</SequenceNumber>
      </LineItem>
   </RetailTransaction>
</Transaction>
</POSLog>
```

11.5 Scenario: Charitable contribution (V2.1)

Brief Description

The manager gives a TV to a charitable cause for a raffle, and it is entered into the POS as a 100% discount.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item data, including:
  - An identifier for the item being sold.
  - The number of multiples of the item being sold.
  - The unit-price of the item
  - The extended amount for the items
- Price modification data, including:
  - The actual price charged for the items.
  - A reason code denoting that the price change is due to incorrect item tag.
  - Approval information identifying the manager who overrode the price.

11.5 Conformance XML Instance Document - Charitable contribution

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase with Manual Price Override Flow: Charitable Contribution
-->
<!-- Note:  RetailPriceModifier with 100% Discount, CharityGift reason code and no
OperatorBypassApproval -->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```

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```
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" FixVersion="0" MinorVersion="0">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>0.00</ExtendedAmount>
               <Quantity>1</Quantity>
               <RetailPriceModifier MethodCode="PriceOverride">
                  <SequenceNumber>1</SequenceNumber>
                  <Amount Action="Subtract">495.00</Amount>
                  <PreviousPrice>495.00</PreviousPrice>
                  <ReasonCode>CharityGift</ReasonCode>
               </RetailPriceModifier>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

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12. USE CASE: Weighted Sales

Brief Description
With a weighted item there are two things to enter, the item's barcode and the item's weight. For each of those two they can be keyed or scanned (for barcode) and keyed or from scale (weight). To support this we need an entry method potentially for a whole host of line items. Located in the line item is an entry method to allow unique entry method identification for each potential line item.

12.1 Scenario: Item purchase by manual weight (V2.1)

Brief Description
Customer purchases an item from the delicatessen, which is sold by weight

Scenario Description
Barbara purchased smoked turkey from Richard's Deli and keyed in the manual weight, price per unit of measure.

The item selection method (PLU, SKU, scan or name search) is evaluated against proposed method to detect if staff training is required.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item sale data, including:
  - An identifier for the item being sold.
  - The amount of the item being sold.
  - The units of measure that the weight is expressed in.
  - Price per unit of measure being charged for the item.
  - The extended amount (i.e. Price per unit * Amount of item)
  - Entry method reporting that weight is keyed in
  - Item selection method used

12.1 ARTS XML Conformance XML Instance Document – Item purchase by manual weight:

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase by Weight -->
<!-- Note: Addition of @Units and @UnitOfMeasureCode -->
<POSLog xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd" MajorVersion="6" MinorVersion="0" FixVersion="0"
   xmlns="http://www.nrf-arts.org/IXRetail/namespace/">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
```

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```
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
        <LineItem EntryMethod="Weighed">
          <Sale ItemType="Stock">
            <POSIdentity>
              <POSItemID>01234567890123</POSItemID>
            </POSIdentity>
            <ExtendedAmount>2.722</ExtendedAmount>
            <!-- Selling one package weighing 1.67Kg -->
            <!-- EntendedAmount = Quantity * Price with modifiers -->
            <Quantity Units="1.67" UnitOfMeasureCode="Kg">1</Quantity>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
      </RetailTransaction>
    </Transaction>
</POSLog>
```

12.2 Scenario: Provide resolution for Quantity for Entry Method Weighed (V6.0)

Brief Description

When printing a transaction with its weight, one only needs to print the digits which have a significant resolution. For example, a Scale with a resolution of 2 g would print "0.820" - the last zero is intentional and correct but a scale with 100g resolution would print "0.8" for a value of 0.800 - here the last two zeroes must not be printed.

To meet this need an attribute call “Resolution” is used to indicate the number of valid digits on both side of the decimal point. For the previous example 0.820 would have a resolution = 0.3. That means there are three valid numbers on the right of the decimal point. If the number is 14.32, then the “Resolution” would be 2.2.

Scenario Description

Data

- Add Resolution to Quantity

12.2 Conformance XML Instance Document - Provide resolution for Quantity for Entry Method Weighed

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

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```
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>2.722</ExtendedAmount>
               <!-- Selling 1.67 Kg of an item priced by weight -->
               <!-- EntendedAmount = Quantity * Price with modifiers -->
               <Quantity Units="1.67" UnitOfMeasureCode="Kg"
Resolution="2">1.00</Quantity>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
</POSLog>
```

12.3 Scenario: Item purchase by random weight (V2.1)

Brief Description
Customer purchases an item from the delicatessen, which is sold by weight.

Data

- Transaction header data, including:
  - Identifiers for Store, Workstation, & Operator performing the transaction.
  - The date the transaction was performed
  - A workstation assigned sequence number identifying the transaction
- Item sale data, including:
  - An identifier for the item being sold.
  - The amount of the item being sold.
  - The units of measure that the weight is expressed in.
  - Price per unit of measure being charged for the item.
  - The extended amount (i.e. Price per unit * Amount of item)

12.3 Conformance XML Instance Document - Item Purchase by Random Weight

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- UseCase: Item Purchase by Weight                -->
<!-- Note: Addition of @Units and @UnitOfMeasureCode -->
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MajorVersion="6" MinorVersion="0" FixVersion="0">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
```

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```
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
        <LineItem EntryMethod="Weighed">
          <Sale ItemType="Stock">
            <POSIdentity>
              <POSItemID>01234567890123</POSItemID>
            </POSIdentity>
            <ExtendedAmount>2.722</ExtendedAmount>
            <!-- Selling 1.67Kg of an item priced by Kg -->
            <!-- EntendedAmount = Quantity * Price with modifiers -->
            <Quantity Units="1" UnitOfMeasureCode="Kg">1.67</Quantity>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
      </RetailTransaction>
    </Transaction>
</POSLog>
```

12.4 Scenario: Sold by Weight with Tare Removed (V2.2)

Brief Description

Customer buys a quantity of beans sold in a box. The weight of the box needs to be removed from the weight of the beans.

Data

- The weight of the beans
- The price by weight
- The weight of the box

12.4 Conformance XML Instance Document - Sold by Weight with Tare Removed

```
<?xml version="1.0" encoding="UTF-8"?>
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
    MinorVersion="0" MajorVersion="6" FixVersion="0">
    <Transaction>
      <BusinessUnit>
        <UnitID>HighStreet</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <POSLogDateTime>2001-08-13T08:05:00</POSLogDateTime>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
        <LineItem  EntryMethod="Weighed">
          <Sale ItemType="Stock">
```

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```
            <POSIdentity>
               <POSItemID>01234567890123</POSItemID>
            </POSIdentity>
            <ExtendedAmount>4.89</ExtendedAmount>
            <!-- Selling 2.04 Kg of beans -->
            <!-- EntendedAmount = Quantity * Price with modifiers -->
            <Quantity Units="1" UnitOfMeasureCode="Kg">2.04</Quantity>
         </Sale>
         <SequenceNumber>1</SequenceNumber>
      </LineItem>
      <LineItem>
         <Sale ItemType="Tare">
            <POSIdentity POSIDType="SKU">
               <POSItemID>1234</POSItemID>
            </POSIdentity>
            <ExtendedAmount>1.00</ExtendedAmount>
         </Sale>
         <SequenceNumber>2</SequenceNumber>
      </LineItem>
   </RetailTransaction>
</Transaction>
</POSLog>
```

12.5 Scenario: Sold by Weight with different measurements for pricing and inventory (V6.0)

Brief Description
We need a quantity for pricing and a quantity for inventory
A slice of cheese is sold by weight but inventoried by slices

Mix different slices of cheese into one bag and the bag is sold by weight but the operator verifies the number of slices. This is a mix-match model.
At scale weight 1 type cheese and put in bag, then weight another type of cheese and put into the same bag. There are two line items in this customer order with receipt printed saying there are two type of cheeses.

Case 1:
Item sold by weight with standard baseunit (1kg/lb). Sold one piece of cheese of weight 4.5 KG but priced by piece

```
<Quantity Type=”Sell” UnitOfMeasureCode="piece" >1</Quantity>
<Quantity Type=”Inventory” UnitOfMeasureCode="KG" >4.5</Quantity>
```

Case 2:
Sold four sausages of total weight 2.5 KG priced by weight

```
<Quantity Type=”Sell” UnitOfMeasureCode="KG" >2.5</Quantity>
<Quantity Type=”Inventory” UnitOfMeasureCode="EA" >4</Quantity>
```

Case 3:
Item sold per piece Sold 3 coca cola in units of 1 each

```
<Quantity Type=”Sell” Units="1" UnitOfMeasureCode="EA" >3</Quantity>
```

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Case 4:
Sold four Kiwi fruits [sold by piece] having a total weight of 0.5 KG
<Quantity Type=”Inventory” UnitOfMeasureCode="KG" >.5</Quantity>
<Quantity Type=”Sell” UnitOfMeasureCode="EA" >4</Quantity>

Case 5:
Fixed Weight [versus random weight] One chicken sold by 1.2 KG average weight – with actual net weight of 1.240 KG
<Quantity Type=”Sell” UnitOfMeasureCode="EA" >1</Quantity>
<Quantity Type=”Inventory” UnitOfMeasureCode="KG" >1.2</Quantity>
<Quantity Type=”Label” UnitOfMeasureCode="KG" >1.240</Quantity>

Data

- The weight of the beans
- The price by weight
- The weight of the box

12.5 Conformance XML Instance Document - Sold by Weight with different measurements for pricing and inventory

```
<?xml version="1.0" encoding="UTF-8"?>
<POSLog xmlns="http://www.nrf-arts.org/IXRetail/namespace/"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.nrf-arts.org/IXRetail/namespace/
../POSLogV6.0.0.xsd"
   MinorVersion="0" MajorVersion="6" FixVersion="0">
   <Transaction>
      <BusinessUnit>
         <UnitID>HighStreet</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <POSLogDateTime>2001-08-13T08:05:00</POSLogDateTime>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>4.89</ExtendedAmount>
               <!-- Selling 1 package of cheese -->
               <!-- EntendedAmount = Quantity * Price with modifiers -->
               <Quantity Type="Sell" UnitOfMeasureCode="EA">1</Quantity>
               <Quantity Type="Inventory" UnitOfMeasureCode="Kg">4.5</Quantity>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
      </RetailTransaction>
   </Transaction>
```

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```
</POSLog>
```

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13. Use Case: Ticketing

13.1 Scenario: Seat Information (V6.0)

Brief Description
A theatre wishes to sell 5 tickets (1 item ,quantity 5) to one show. Each ticket has its own serial number and associated seat number, i.e. reserved seating.

To return one ticket would be a normal return with quantity 1 and the ticket information

Scenario Description
Charles bought five tickets to a show for $25 each.

Data
Serial Number
- Section
- Row
- Seat

13.1 Conformance XML Instance Document – Seat Information

```
<?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="HighStreet">100</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>125.00</ExtendedAmount>
               <Quantity>5</Quantity>
               <Ticket>
                  <!-- number for this ticket -->
                  <SerialNumber Section="4" Row="3" Seat="1">121</SerialNumber>
               </Ticket>
               <Ticket>
                  <SerialNumber Section="4" Row="3" Seat="2">122</SerialNumber>
               </Ticket>
```

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```
            <Ticket>
               <SerialNumber Section="4" Row="3" Seat="3">123</SerialNumber>
            </Ticket>
            <Ticket>
               <SerialNumber Section="4" Row="3" Seat="4">124</SerialNumber>
            </Ticket>
            <Ticket>
               <SerialNumber Section="4" Row="3" Seat="5">125</SerialNumber>
            </Ticket>
         </Sale>
         <SequenceNumber>1</SequenceNumber>
      </LineItem>
      <LineItem>
         <Tender>
            <Amount>125</Amount>
         </Tender>
         <SequenceNumber>2</SequenceNumber>
      </LineItem>
   </RetailTransaction>
</Transaction>
</POSLog>
```

13.2 Scenario: Ticket Specific Information (V6.0)

Brief Description

Certain information should be printed onto tickets so that the purchaser knows what the tickets are for and when and where the event will be and this information should also be logged with the ticket sale.

Scenario Description

A customer goes to a movie theatre and buys 2 adult tickets to a movie. They decide to see the 4pm showing of “SomeMovieName”.

Data

- PrintedTicketName - Ticket name printed on actual ticket. This could be as simple like "Adult" or complex like "ADMAT3D".
- TicketPriceScheme - Price scheme of the ticket; gives extra information on the ticket price. A price scheme contains a set of tickets at specific prices, so you can just assign a pricing scheme to a performance instead of having to assign individual tickets. Examples might be: "Matinee", "IMAX"
- EntertainmentEventID - ID of the event for which the ticket was purchased. For a movie theatre, this would contain the POS created performance id (uniquely identified that performance in the POS).
- EntertainmentEventName - Name of event.
- EntertainmentEventBusinessDate - Business date on which the event takes place.
- EntertainmentEventDateTime - Calendar date and time on which the event occurs. Note: The event date can differ from the event business date.
- EntertainmentEventLocation - Where the event is taking place (e.g. Auditorium number for a movie theatre)

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- EntertainmentEventContentID - Content being shown at the event
    - "Print" - If there are multple copies of the content, which one is this. Note: Could hold the CPL in the future for digital prints

Example

- TicketName = Adult
- PriceScheme = Matinee
- Event id = 33212
- Event name = Halter's Revenge
- Content id = 0499549
- Business date = 2013-10-31
- Event datetime = 2013-10-31T09:03:00
- Location = auditorium 11
- Ticket 1 = row 4 seat 12 serial# 0120301235235
- Ticket 2 = row 4 seat 13 serial# 0120301235236

13.2 Conformance XML Instance Document - Ticket Specific Information

```
<?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="HighStreet">100</UnitID>
      </BusinessUnit>
      <WorkstationID>POS5</WorkstationID>
      <SequenceNumber>4294967295</SequenceNumber>
      <OperatorID>John</OperatorID>
      <RetailTransaction>
         <LineItem>
            <Sale ItemType="Stock">
               <POSIdentity>
                  <POSItemID>01234567890123</POSItemID>
               </POSIdentity>
               <ExtendedAmount>125.00</ExtendedAmount>
               <Quantity>5</Quantity>
               <Ticket PrintedTicketName="Adult" TicketPriceScheme="Matinee"
EventID="33212"
                  EventName="Halter's Revenge" EventBusinessDate="2013-10-31"
                  EventDateTime="2013-10-31T09:03:00" EventLocation="Auditorium 11">
                  <!-- number for the tickets -->
                  <SerialNumber Row="4" Seat="12">0120301235</SerialNumber>
                  <SerialNumber Row="4" Seat="13">0120301236</SerialNumber>
                  <EventContentID>0499549</EventContentID>
               </Ticket>
            </Sale>
            <SequenceNumber>1</SequenceNumber>
         </LineItem>
```

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```
        <LineItem>
          <Tender>
            <Amount>125</Amount>
          </Tender>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
      </RetailTransaction>
    </Transaction>
</POSLog>
```

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14. Document History

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15. Version History

Version 1.0

Overview

New Features

Sections	Description of Change
	-

Minor fixes

Deprecation

Sections	Description of Change
	-

Compatibility/Dependencies Issues

Previous Document

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16. GLOSSARY

Term	Definition

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