

# **ARTS POSLog V6.0**

**Volume 15: Loyalty Line Items Technical Specification**February 10, 2014 – Last Call Working Draft

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- 1. Abstract
- 1.1 Overview
- 1.2 In Scope
- 1.3 Out of Scope

#### 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 <a href="http://nrf.com">http://nrf.com</a>

#### 3. ARTS Common Header

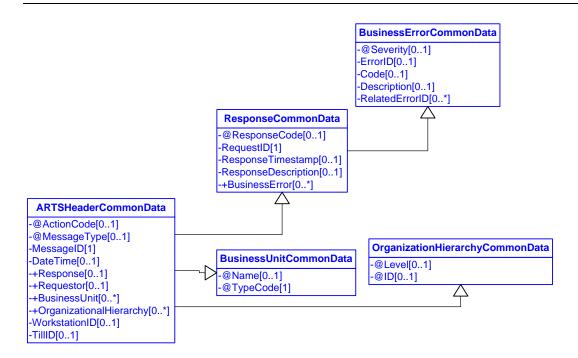


Figure 1: ARTS Common Header Domain View

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



Figure 2: ARTS Common Header Representation

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

#### 4. Use case: Capture Customer Information

### 4.1 Scenario: Customer Base Registration During Sales (V6.0)

Storing data that is effective for promotions, CRM, product marketing, and business-line strategy plans for MD are possible by including customer base information in the sales data collected through POS sales. As to all business transactions between convenience stores in Japan, to confirm that they collect accurate data about their customer base, POS operation is designed not to finish unless the customer base information, based on their physical appearance is inputted.

In the customer base, each and every customer has their own unique details set, based on whether they have their own profile or not. If a customer's profile exists, it is retrieved using the customer's ID, and both the customer base information and customer ID are stored in the POSLog. Sometimes, even though there is a profile available for that customer, instead of searching for their profile information, it is also possible to create one by inputting the categories they fall under. In case there is no profile available for a customer, it is also possible just to store their category. There is also the case in some stores where the customer is registered as a new customer and issued a new ID if no profile exists. In this case, both the customer ID and customer category are stored in the POSLog.

#### **Brief Description**

An operator asks the customer for their customer ID. If the customer has an ID, the payment process is carried out after both the ID is input, and item scanning and registration is done. If the customer has no ID, the operator can determine their category by either judging the customer by their physical appearance or by inquiring about their sex and age. The POS stores the customer base information in the POSLog.

#### Data

- Additions to customer class with the following entities.
  - Customer ID
     Entry method (Scanned, Keyed)
  - Stores the customer ID
  - Customer Classes
     Stores the customer category.

#### 4.1 Conformance XML Instance Doc – Customer Base Registration During Sale

```
<UnitID TypeCode="RetailStore">12</UnitID>
     </BusinessUnit>
     <WorkstationID TypeCode="POS">5</WorkstationID>
     <SequenceNumber>12345</SequenceNumber>
     <OperatorID>205</OperatorID>
     <RetailTransaction>
       <LineItem>
          <Sale ItemType="Stock">
             <POSIdentity>
               <POSItemID>121341234</POSItemID>
             </POSIdentity>
             <ExtendedAmount>1.00</ExtendedAmount>
          <SequenceNumber>1</SequenceNumber>
       </LineItem>
       <LineItem>
          <Tender TenderType="Cash">
             <Amount>1.00</Amount>
          </Tender>
          <SequenceNumber>2</SequenceNumber>
       </LineItem>
       <Customer Action="Enroll" EntryMethod="Keyed">
          <CustomerID>A23BD</CustomerID>
          <Name>
             <Name TypeCode="FamilyName">Sher</Name>
             <Name TypeCode="GivenName">Bill</Name>
          </Name>
       </Customer>
     </RetailTransaction>
     <TillID>5</TillID>
     <BusinessDayDate>2011-11-11</BusinessDayDate>
  </Transaction>
</POSLog>
```

# 4.2 Scenario: Customer Want to Void and replace his loyalty card During Sales (V6.0)

#### **Brief Description**

The customer has two Loyalty cards and by mistake he gave his wife's card; he wants to void his wife's card and swipe his card.

#### **Data**

- Additions to customer class with the following entities.
  - Customer ID
     Entry method (Scanned, Keyd)
     Void flag

### 4.2 Conformance XML Instance Doc – Void and Replace Loyalty Card

```
<?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 TypeCode="RetailStore">12</UnitID>
     </BusinessUnit>
     <WorkstationID TypeCode="POS">5</WorkstationID>
     <SequenceNumber>12345</SequenceNumber>
     <OperatorID>205</OperatorID>
     <CustomerOrderTransaction>
        <LineItem CancelFlag="true">
           <Tender TenderType="Loyalty">
             <CreditDebit CardType="Loyalty">
                <PrimaryAccountNumber>1231</PrimaryAccountNumber>
             </CreditDebit>
           </Tender>
           <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
          <Tender TenderType="Loyalty">
             <CreditDebit CardType="Loyalty">
                <PrimaryAccountNumber>2345</PrimaryAccountNumber>
             </CreditDebit>
           </Tender>
           <SequenceNumber>2</SequenceNumber>
        </LineItem>
     </CustomerOrderTransaction>
     <TillID>5</TillID>
     <BusinessDayDate>2011-11-11</BusinessDayDate>
     <BeginDateTime>2011-11-11T20:20:20</BeginDateTime>
  </Transaction>
</POSLog>
```

# 5. Use Case: Campaign Management/ Promotions/ Targeted Offers Customer History/Pattern (Purchases, Returns)

#### 5.1 Scenario: Customer gets points for purchasing item (V6.0)

#### **Brief Description**

#### **Scenario Description**

Customer buys a super dog and gets 5 food points for the purchase.

#### **Pre-Condition**

- 1. Already enrolled in customer app
- 2. Previously retrieved Customer ID

#### **Post-Condition**

#### Data

Customer ID	
CustomerAccount	
LoyaltyAccount	
LoyaltyAmount	
@type	Points assigned

#### 5.1 Conformance XML Instance Doc - Loyalty Points Awarded

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
           <Sale ItemType="Stock">
             <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
             </POSIdentity>
             <ExtendedAmount>4.89</ExtendedAmount>
           <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
           <LoyaltyReward>
```

# 5.2 Scenario: Respond to Customer with Targeted Offer (Offer Sent Online to POS) (V6.0)

#### **Brief Description**

Customer identifies themselves to the POS. POS sends id and basket information to Customer App and gets targeted offer (coupon code, 10% discount, offer code) back. In addition, points were awarded for the transaction and the point balance is returned to the POS.

#### **Pre-Condition**

Previously retrieved Customer ID

#### **Post-Condition**

#### Data

Customer ID	
Promotion Type	
TransactionSequenceNumber	POS Transaction ID
Coupon	
Discount amount or Percent	
Discount Type	
CustomerAccount	
LoyaltyAccount	
@type	points
Points Type="Assigned	

This needs to match up with Stored Value because it feeds stored value

#### 5.2 Conformance XML Instance Doc - Offer Sent Online to POS

```
<?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/"</pre>
```

```
../POSLogV6.0.0.xsd"
  MajorVersion="6" MinorVersion="0" FixVersion="0">
  <Transaction>
     <BusinessUnit>
       <UnitID>HighStreet</UnitID>
     </BusinessUnit>
     <WorkstationID>POS5</WorkstationID>
     <SequenceNumber>4294967295</SequenceNumber>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
       <LineItem>
          <Sale ItemType="Stock">
             <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
             </POSIdentity>
             <ExtendedAmount>4.89</ExtendedAmount>
             <RetailPriceModifier MethodCode="Promotion">
                <SequenceNumber>1</SequenceNumber>
                <Amount Action="Subtract">.99</Amount>
                <PromotionID>34565678</PromotionID>
                <ReasonCode>Coupon</ReasonCode>
             </RetailPriceModifier>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
       </LineItem>
       <LineItem>
          <LoyaltyReward>
             <PromotionID>122345</PromotionID>
             <LoyaltyID>1234</LoyaltyID>
             <PointsAwarded>25</PointsAwarded>
          </LovaltyReward>
          <SequenceNumber>2</SequenceNumber>
       </LineItem>
       <Customer>
          <CustomerID>A23BD</CustomerID>
          <!-- Customer Account -->
          <AccountNumber>4567567</AccountNumber>
        </Customer>
     </RetailTransaction>
  </Transaction>
</POSLog>
```

#### 5.3 Scenario: Suggested Item (6.0)

**Brief Description** 

Customer identifies himself to the Web site. The Web POS sends id and basket information to Customer App. Based on this purchase, they get back a message promoting a related item.

# Pre-Condition Post-Condition Data

Customer common data	
Customer account	
Suggestion	Indication this item was suggested
TransactionSequenceNumber	
Item TypeCode="Suggestion	Suggested Item
Item TypeCode="Original	Ties the suggested items to this item (1*)
Item	
ItemID TypeCode="SKU	
Price	
Quantity	
MerchandiseHierarchy	
Level="Department	

## 5.3 Conformance XML Instance Doc - Suggested Item

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
           <Sale ItemType="Stock">
             <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
             </POSIdentity>
             <ExtendedAmount>4.89</ExtendedAmount>
           </Sale>
           <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
           <Sale ItemType="Stock" SuggestedFlag="true"
SuggestedSource="Loyalty">
```

```
<POSIdentity>
                <POSItemID>98763</POSItemID>
             </POSIdentity>
             <MerchandiseHierarchy
Level="Department">Shirts</MerchandiseHierarchy>
             <ExtendedAmount>14.00</ExtendedAmount>
             <TransactionLink ReasonCode="SuggestedItem">
                <TransactionID>1</TransactionID>
                <LineItemSequenceNumber>1</LineItemSequenceNumber>
             </TransactionLink>
          </Sale>
          <SequenceNumber>2</SequenceNumber>
       </LineItem>
       <Total TotalType="TransactionGrossAmount">18.89</Total>
       <Customer>
          <CustomerID>A23BD</CustomerID>
          <!-- Customer Account -->
          <AccountNumber>4567567</AccountNumber>
       </Customer>
     </RetailTransaction>
  </Transaction>
</POSLog>
```

#### 5.4 Scenario: Customer Attempts to Redeem Targeted Offer (6.0)

#### **Brief Description**

Customer attempts to redeem personalized offer. Validate all criteria remain valid such as customer information, expiration, etc. Redemption will be tied to a customer could be tied to an item or a transaction.

#### Scenario Description

Customer gets a letter from My Favorite Store to receive \$10 off the purchase of a Blue Plate Special on Friday the 13<sup>th</sup>. (The letter is bar coded for the Customer). Customer redeems the offer on Friday the 13<sup>th</sup>.

Alternatively, Customer gets a letter from My Favorite Store to receive \$100 off the purchase of a piano on Friday the 13<sup>th</sup>. (The letter is bar coded for Doug).

#### **Pre-Condition**

Pricing server handles actual discounting including necessary lookup of the serialized bar code into appropriate discount rule.

#### **Post-Condition**

#### Data

Customer common data	
Customer account	
Loyalty account	
Promotion id	
Coupon information	

Retail Price Modifier	
Loyalty Redemption	This ties the change in price to the loyalty which
	triggered it.

# 5.4 Conformance XML Instance Doc – Customer attempts to redeem personalized offer

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
          <Sale ItemType="Stock">
             <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
             </POSIdentity>
             <ExtendedAmount>4.89</ExtendedAmount>
             <RetailPriceModifier MethodCode="Promotion">
                <SequenceNumber>1</SequenceNumber>
                <PromotionID>a234</PromotionID>
                <ReasonCode>Coupon</ReasonCode>
             </RetailPriceModifier>
           </Sale>
           <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <Customer>
           <CustomerID>A23BD</CustomerID>
           <!-- Customer Account -->
           <AccountNumber>4567567</AccountNumber>
        </Customer>
     </RetailTransaction>
  </Transaction>
</POSLog>
```

#### 5.5 Scenario: Customer Attempts to redeem a tender coupon (6.0)

#### **Brief Description**

Customer receives via e-mail a Tender coupon voucher from the retailer with value of 10.00\$ for using as a discount. He wants to buy Microwave pay with coupon and cash.

# 5.5 Conformance XML Instance Doc - Customer attempts to redeem a tender coupon

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
          <Sale ItemType="Stock">
             <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
             </POSIdentity>
             <ExtendedAmount>4.89</ExtendedAmount>
             <RetailPriceModifier MethodCode="Promotion">
                <SequenceNumber>1</SequenceNumber>
                <PromotionID>a234</PromotionID>
                <ReasonCode>Coupon</ReasonCode>
             </RetailPriceModifier>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <Customer>
          <CustomerID>A23BD</CustomerID>
          <!-- Customer Account -->
          <AccountNumber>4567567</AccountNumber>
        </Customer>
     </RetailTransaction>
  </Transaction>
</POSLog>
```

#### 5.6 Scenario: Customer Redeems Loyalty points (V6.0)

#### **Brief Description**

Customer pays for the entire transaction with Loyalty Points- Joins Airlines Club and pays with air miles.

Customer attempts to redeem loyalty points in the purchase of an item. Validate all criteria such as customer information, expiration, etc. Redemption will be tied to a customer, and could be tied to an item or a transaction. Customer's point balance is updated, and the redemption is recorded by the customer app for later analysis of the loyalty program usage.

# Pre-Condition Post-Condition Data

Customer common data								
CustomerAccount								
LoyaltyAccount								
Points Type="Balance	<b>Current Point E</b>	Balance						
Tender								
Need Transaction Link to the item in which this loyalty,	Identifies the tender.	qualifier	for	being	able	to	use	this
coupon,								

### 5.6 Conformance XML Instance Doc – Customer redeems loyalty points

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
           <Sale ItemType="Stock">
             <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
             </POSIdentity>
             <ExtendedAmount>4.89</ExtendedAmount>
           </Sale>
```

# 5.7 Scenario: Loyalty Program Customer Returns Items Purchased with Points (V6.0)

#### **Brief Description**

Jason purchased a toaster with loyalty points. He returns the toaster, and wants the points added back into his balance.

#### **Pre-Condition**

The Transaction Level Detail (TLD) is available for the POS to retrieve the details (might be a back office server or the receipt or ...) and report the points redeemed on the original purchase.

## **Post-Condition**

#### Data

Customer common data					
CustomerAccount					
LoyaltyAccount					
Points Type="Balance	Current Point Balance				
Tender					
Need Transaction Link to the item in which this loyalty,	Identifies the qualifier for being able to use this tender.				
coupon,					

# 5.7 Conformance XML Instance Doc - Customer returns item purchased with points

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
          <Return ItemType="Stock">
             <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
             </POSIdentity>
             <ExtendedAmount>4.89</ExtendedAmount>
             <Quantity>3</Quantity>
             <TransactionLink ReasonCode="Return">
                <BusinessUnit>101</BusinessUnit>
                <WorkstationID>POS5</WorkstationID>
                <BusinessDavDate>
                   <Date>2013-03-03</Date>
                </BusinessDayDate>
                <SequenceNumber>42949672912</SequenceNumber>
             </TransactionLink>
             <Disposal Method="ReturnToStock"/>
          </Return>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
          <LovaltyReward>
             <PointsAwarded Type="Reversal">489</PointsAwarded>
          </LovaltyReward>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
        <Customer>
          <CustomerID>2341234</CustomerID>
        </Customer>
     </RetailTransaction>
  </Transaction>
</POSLog>
```

#### 5.8 Scenario: Presentation of a Company Loyalty or Promotional Voucher (V6.0)

### **Brief Description**

An Item Sale is recorded, then the customer presents a Voucher entitling them to a 2.0£ value or percentage off the item just sold. There is an EAN 128 barcode on the voucher which is scanned and which contains a 6 digit Offer ID, a 5 digit value or percentage (with last two digits to follow an implied decimal point, i.e.01000 is 10) a one character indicator to determine Loyalty or Promotion, a 12 digit Voucher Serial Number and finally a 4 digit Expiry value (which is the number of days from 31/12/99 to the expiry date. The

Offer ID equates to Promotion ID and this promotion determines whether the value is a Value or Percentage Off and the Reason Code to be used.

Pre-Conditions Post-Conditions Data

# 5.8 Conformance XML Instance Doc – Presentation of a Company Loyalty or Promotional Voucher

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
          <Sale ItemType="Stock">
             <POSIdentity>
                <POSItemID>121341234</POSItemID>
             </POSIdentity>
             <ExtendedAmount>1.00</ExtendedAmount>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
          <LoyaltyRedemption>
             <Voucher TypeCode="Voucher">
                <SerialNumber>12345678901234</SerialNumber>
             </Voucher>
             <Amount>100</Amount>
          </LoyaltyRedemption>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
        <LineItem>
          <Tender TenderType="Cash">
             <Amount>1.00</Amount>
          </Tender>
          <SequenceNumber>3</SequenceNumber>
```

# 5.9 Scenario: Tender with Loyalty Card as Both Loyalty and Credit (Credit Card Doubles as Loyalty Card) (V6.0)

#### **Brief Description**

Allow a Loyalty Card to be swiped during a transaction. The card is similar to a credit card and needs to capture the IIN and Issue Sequence Number from Track 2. Company also issues Store Cards, which double as loyalty cards, but which also enable tendering as though with a normal credit card. A Loyalty/Store Card card is issued to an individual but other individuals (usually family members) may be issued with cards associated with the same Loyalty/Store Card account. The IIN identifies the Loyalty/Store Card account holder and the Issue Sequence Number the associated member.

Pass the Loyalty/Store Card IIN and Issue Sequence Number in the POSLOG clearly identifiable a Loyalty Card data separate from any CreditCard tender details that may involve a Store Card.

#### **Scenario Description**

Joe bought a \$10.00 pizza at the Local Pizza Place and paid for it with both 200 points and \$8.00 credit.

Pre-Conditions
Post-Conditions
Other Touch Point Scenarios
Data

# 5.9 Conformance XML Instance Doc – Tender with Loyalty Card as Both Loyalty and Credit

```
<OperatorID>John</OperatorID>
     <RetailTransaction>
       <LineItem>
          <Sale ItemType="Stock">
             <POSIdentity>
               <POSItemID>121341234</POSItemID>
             </POSIdentity>
             <ExtendedAmount>1.00</ExtendedAmount>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
       </LineItem>
       <LineItem>
          <LoyaltyRedemption>
             <PointsRedeemed>100</PointsRedeemed>
             <LovaltyProgram TypeCode="LoyaltyCard">
               <LoyaltyCard CardType="Loyalty">
  <|ssuerIdentificationNumber>12341234
                  <PrimaryAccountNumber>12341234</PrimaryAccountNumber>
               </LoyaltyCard>
             </LoyaltyProgram>
             <Amount>100</Amount>
          </LoyaltyRedemption>
          <SequenceNumber>2</SequenceNumber>
       </LineItem>
       <LineItem>
          <Tender TenderType="CreditDebit">
             <Amount>1.00</Amount>
             <CreditDebit CardType="Credit">
               <lssuerIdentificationNumber>12341234/IssuerIdentificationNumber>
               <PrimaryAccountNumber>12341234</PrimaryAccountNumber>
             </CreditDebit>
          </Tender>
          <SequenceNumber>3</SequenceNumber>
       </LineItem>
     </RetailTransaction>
  </Transaction>
</POSLog>
```

### 5.10 Scenario: Addition of points according to the purchased items (V6.0)

The retail sellers give points to the customers according to the attribute of item and the purchased amount. When the points exceeds a specified level, they can be exchanged with gift certificate and specific services. (Also they can be exchanged with the mileage points.)

In most cases, n% of the purchased amount is given to the customer. In some cases, for example, triple points are given when specific items are purchased, or double points are given in the specific period, which can be utilized for promotion.

As point calculation is programmed into the business logic installed in the POS terminal, calculation method differs according to the company. Only the result of calculation is stored into the POSLog.

#### **Brief Description**

The operator scans items and registers them. The POS terminal calculates the point to be given according to the attribute of item and the purchased amount. When the customer uses a token, etc., the operator can override the points calculated by the POS terminal to enter. The POS terminal stores the information regarding the fixed points into the POSLog.

#### **Scenario Description**

Customer bought a steak dinner at The Steak House for \$25.00 and got 100 points.

#### Data

- The entity below contains the point information.
  - Item sales

# 5.10 Conformance XML Instance Doc - Addition of points according to the purchased items

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
           <Sale ItemType="Stock">
             <POSIdentity>
                <POSItemID>121341234</POSItemID>
             </POSIdentity>
             <ExtendedAmount>4.89</ExtendedAmount>
           </Sale>
           <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
           <LovaltyReward>
             <PointsAwarded>4</PointsAwarded>
           </LovaltyReward>
           <SequenceNumber>2</SequenceNumber>
```

```
</LineItem>
        <LineItem>
          <Tender TenderType="Cash">
             <Amount>4.89</Amount>
          </Tender>
          <SequenceNumber>3</SequenceNumber>
        </LineItem>
        <LineItem>
          <Points>
             <AmountForPoints>4.89</AmountForPoints>
             <PointRate>1.0</PointRate>
             <PointMagnification>1.0</PointMagnification>
             <CorrectionPoints>0</CorrectionPoints>
          </Points>
          <SequenceNumber>4</SequenceNumber>
        </LineItem>
     </RetailTransaction>
  </Transaction>
</POSLog>
```

#### 6. Use Case: Loyalty (Clubs)

#### 6.1 Scenario: Qualifying Customer Club Purchase (V6.0)

#### **Brief Description**

This scenario is about getting a free item after purchasing a minimal number of the same or equivalent items.

#### **Scenario Description**

Lola has enrolled in a retailer's Cosmetic Club. She gets credit for each qualifying transaction – (when she has purchased 10 items, she receives an 11<sup>th</sup> item free). She is purchasing her 9<sup>th</sup> and 10<sup>th</sup> item at the POS.

# Pre-Condition Post-Condition Data

CustomerAccount					
LoyaltyAccount					
LoyaltyAccountID	The particular account that was incremented (optional)				
ItemCountType	One for each counter incremented (optional)				
QualifiedItemID	This identifies the items used in this count from the basket				
	as qualified purchases towards the target (optional)				
OfferID	Identifies the promotion or offer to which this counter is				
	associated (optional)				

#### 6.1 Conformance XML Instance Doc - Qualifying Customer Club Purchase

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
           <Sale ItemType="Stock">
              <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
              </POSIdentity>
```

```
<ExtendedAmount>9.78</ExtendedAmount>
             <Modification Action="QualifyingPurchase">
                <Quantity>2</Quantity>
             </Modification>
             <LoyaltyAccount>
                <CustomerID>awer2342</CustomerID>
                <LoyaltyProgram>
                   <LoyaltyProgramID>1234</LoyaltyProgramID>
                </LoyaltyProgram>
             </LoyaltyAccount>
           </Sale>
           <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
          <Tender TenderType="Cash">
             <Amount>9.78</Amount>
          </Tender>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
     </RetailTransaction>
  </Transaction>
</POSLog>
```

# 6.2 Scenario: Program Enrollment (Club/loyalty program enrollment) (V6.0) Brief Description

#### **Scenario Description**

Sylvia enrolls in a retailer's Cosmetic Club and pays the first month's fee.

#### **Pre-Condition**

Customer has been created previously

#### **Post-Condition**

#### Data

Line Item Loyalty Enrollment								
Membership fee								
Customer common data								
CustomerAccount								
LoyaltyAccount								
LoyaltyProgramID	Identifies	the	account	for	this	program	for	this
	customer							
LoyaltyAccountID		•						

#### 6.2 Conformance XML Instance Doc –Customer Pays Enrollment Fee

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID OperatorName="John">1234/OperatorID>
     <RetailTransaction>
        <LineItem>
          <Sale ItemType="Fee">
             <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
             </POSIdentity>
             <ExtendedAmount>9.78</ExtendedAmount>
             <LovaltyAccount>
                <CustomerID>awer2342</CustomerID>
                <LoyaltyProgram>
                   <LoyaltyProgramID>1234</LoyaltyProgramID>
                </LoyaltyProgram>
             </LoyaltyAccount>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
          <Tender TenderType="Cash">
             <Amount>9.78</Amount>
          </Tender>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
     </RetailTransaction>
  </Transaction>
</POSLog>
```

# 6.3 Scenario: Cancel Customer Club Membership (V6.0) Brief Description

**Scenario Description** 

Customer cancels her enrollment in a retailer's Cosmetic Club, because she doesn't want to pay the monthly fee anymore and gets a refund.

#### **Pre-Condition**

Customer has been created previously

#### **Post-Condition**

#### Data

Return of previous scenario	
Customer common data	
CustomerAccount	
LoyaltyAccount	
LoyaltyAccountID	
Fees TypeCode="Refunded"	If fees where paid to join program
Currency="USD	

# 6.3 Conformance XML Instance Doc - Cancel Customer Club and Get Refund Membership

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID OperatorName="John">1234/OperatorID>
     <RetailTransaction>
        <LineItem>
          <Return ItemType="FeeRefund">
             <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
             </POSIdentity>
             <ExtendedAmount>9.78</ExtendedAmount>
             <LovaltyAccount>
                <CustomerID>awer2342</CustomerID>
                <LoyaltyProgram>
                   <LoyaltyProgramID>1234</LoyaltyProgramID>
                </LovaltyProgram>
             </LoyaltyAccount>
             <Reason>Cancel club membership</Reason>
          </Return>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
```

#### 7. Use case: Point Engine (Loyalty)

### 7.1 Scenario: Loyalty Point Adjustment. (V6.0)

# Brief Description Scenario Description

Customer is adamant that his loyalty point balance was updated incorrectly. Operator makes a point adjustment for him to correct the situation.

# Pre-Condition Post-Condition

D	а	t	8
_	u	•	·

Response Code	OK
	Rejected
Response Description	Points updated
	Not allowed
	Customer's Loyalty account is inactive
CustomerID	
Memo – Text Message	Message to be displayed to the customer
CustomerAccount	
AdjustmentID	Unique identifier for this adjustment for audit
Points Type="Balance	Updated points after adjustment

#### 7.1 Conformance XML Instance Doc – Loyalty Point Adjustment

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LoyaltyProgram>
           <CustomerID>1243XCS</CustomerID>
           <LoyaltyAccount>
             <Adjustment>
                <AdjustmentID>174</AdjustmentID>
                <Points Type="Credited">50</Points>
                <ReasonCode>Customer Satisfaction</ReasonCode>
                <LoyaltyAccountID>12341234</LoyaltyAccountID>
             </Adjustment>
```

```
</LoyaltyAccount>
</LoyaltyProgram>
</RetailTransaction>
</Transaction>
</POSLog>
```

#### 7.2 Scenario: Retrospective Loyalty (V6.0)

#### **Brief Description**

Retrospective Loyalty function whereby a customer who bought something, but did not have their Loyalty/Store Card with them, may, at a later time, bring the appropriate Customer Receipt and their Loyalty Card so that the Loyalty/Store Card may be associated with the previous transaction. The auditing software that receives the POSLog does not retain previous transaction data and so requires up to pass in the POSLog, in addition to the key fields of the previous transaction, the Total Spend from the original transaction and the Loyalty/Store Card details.

#### Similar use case:

In this instance a customer leaves something in the cart after paying for it. An employee finds it, re-enters it into inventory and returns it to the shelf. The customer, after realizing the mistake, returns to the store to reclaim their items. It's not a resale but their stuff needs to be removed from inventory. This has a couple of things. One when the items are put back into inventory, it needs to be logged as some sort of customer mistake/ forgotten item. When the items are picked up, the items picked up need to be compared against the forgotten item list.

#### **Data**

#### 7.2 Conformance XML Instance Document – Retrospective Loyalty

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
           <RetrospectiveLoyalty>
              <OriginalTransactionAmount>47.50</OriginalTransactionAmount>
              <TransactionLink ReasonCode="RetrospectiveLoyalty">
                <TransactionID>200</TransactionID>
```

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

#### 8. Use Case: Customer Loyalty Customer Order Transaction

#### 8.1 Scenario: Customer redeems loyalty points failure (V6.0)

#### **Brief Description**

A customer tries to purchase 2 items with their loyalty points but find out they don't have sufficient points.

### Assumption

Loyalty points are a tender.

### **Pre-Condition**

### **Post-Condition**

#### Data

Customer common data	
	Need to indicate the points failure
CustomerAccount	
LoyaltyAccount	
Points Type="Balance	Current Point Balance

# 8.1 Conformance XML Instance Document – Customer Redeems Loyalty Points Failure

```
<?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>
     <POSLogDateTime TypeCode="Receipt">2001-08-
13T09:01:00</POSLogDateTime>
     <OperatorID>John</OperatorID>
     <RetailTransaction>
        <LineItem>
           <Sale ItemType="Stock">
              <POSIdentity>
                <POSItemID>01234567890123</POSItemID>
              </POSIdentity>
              <ExtendedAmount>4.89</ExtendedAmount>
           </Sale>
           <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
           <LoyaltyRedemption TypeCode="RedemptionFailure" Reason="Insufficient"</p>
```

. Document History			
			_

ARTS POSLog V6.0 Volume 15: Loyalty Technical Specification

## 10. Version History

### Version 1.0

### Overview

### **New Features**

Sections	Description of Change
	-

### **Minor fixes**

## Deprecation

Sections	Description of Change
	-

## **Compatibility/Dependencies Issues**

### **Previous Document**

## 11. GLOSSARY

Term	Definition