ARTS POSLog V6.0

Volume 21: Forecourt Volume Technical Specification

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- **ARTS Technical Committees Development Process V6.0.4 2009/11/30**

- **ARTS XML Best Practices V2.2 2010/11/11**

- **ARTS Best Practice for Process Modeling V1.0.0 2011/01/04**

- **A RTS SOA Best Practices Technical Report V1.2**

- **ARTS XML Interface Conformance Tool Manual V1.0 2005/08/11**

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

3. ARTS Common Header

Figure 1: ARTS Common Header Domain View

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

Figure 2: ARTS Common Header Representation

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

4. USE CASE: Fuel Sale

4.1 Scenario: Unattended Payment Terminal (UPT)

Brief Description

Unattended Payment Terminal (UPT) attached to a Fuel Dispenser is simpler than a typical POS transaction, since there is only one Fuel Grade sold and one payment method, which is this case is a credit card. The Loyalty data is optional.

Data
- FUEL SOLD RECORD
    - FuellingPointID e.g. FP1
    - NozzleID e.g. 01
    - TankID e.g. Diesel1
    - ProductID e.g. DL
    - VolumeSold =25.17 Litres   (note implicit UOM = metric and 2 decimal places)
    - SalesAmount=21.14 GBP   (note implicit Currency Code is where site is located in Major currency units)
    - UnitPrice=0.840 GBP/Litre (note price in major currency unit)
- PAYMENT METHOD
    - CardSchemeID e.g. VISA,
    - Card number = 4717********6039
- LOYALTY (optional)
    - LoyaltyID=556190191
      PointsAwarded=25

4.1 Conformance XML Instance Document - Unattended Payment Terminal (UPT)

```xml
<?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="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <OperatorID>Unattended</OperatorID>
        <RetailTransaction>
            <LineItem>
                <FuelSale ItemType="Stock">
                    <ItemID>DL</ItemID>
                    <ActualSalesUnitPrice
```

```
Currency="GBP">0.840</ActualSalesUnitPrice>
                    <ExtendedAmount Currency="GBP">21.14</ExtendedAmount>
                    <Quantity UnitOfMeasureCode="LTR">25.17</Quantity>
                    <FuelingPointID>FP1</FuelingPointID>
                    <NozzleID>01</NozzleID>
                    <TankID>Diesel1</TankID>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender TenderType="CreditDebit" TypeCode="Sale">
                    <Amount Currency="GBP">4.89</Amount>
                    <Authorization ElectronicSignature="true">
                        <AuthorizationCode>234</AuthorizationCode>
                    </Authorization>
                    <CreditDebit CardType="Credit">

    <PrimaryAccountNumber>4717*******6039</PrimaryAccountNumber>
                    </CreditDebit>
                </Tender>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

4.2 Scenario: Purchase Fuel and Merchandise Outside

Brief Description
They can buy fuel and merchandise outside at the pump – then pick up the merchandise inside and pickup the receipt.

4.2 Conformance XML Instance Document – Order Fuel and Item at Pump

```
<?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="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <CustomerOrderTransaction TransactionStatus="Suspended">
            <LineItem>
                <!-- Fuel Purchase -->
                <FuelSale>
```

```xml
                    <POSIdentity POSIDType="SKU">
                        <POSItemID>123</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>15.00</ExtendedAmount>
                    <Quantity>12.35</Quantity>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <!-- Candy Bar -->
                <Sale>
                    <POSIdentity POSIDType="SKU">
                        <POSItemID>3456</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>5.00</ExtendedAmount>
                </Sale>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender TenderType="CreditDebit">
                    <Amount>20.00</Amount>
                    <Authorization PreAuthorizationFlag="true">
                        <AuthorizationCode>awser12</AuthorizationCode>
                    </Authorization>
                    <CreditDebit CardType="Credit" TypeCode="Visa">

    <PrimaryAccountNumber>4717*******6039</PrimaryAccountNumber>
                    </CreditDebit>
                </Tender>
                <SequenceNumber>3</SequenceNumber>
            </LineItem>
        </CustomerOrderTransaction>
    </Transaction>
</POSLog>
```
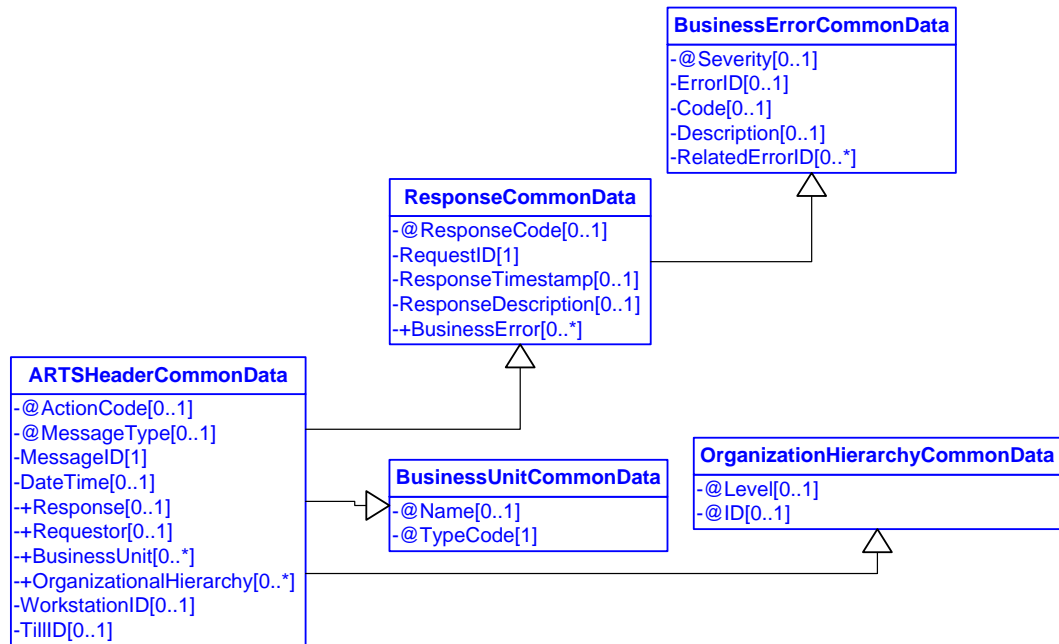
4.3 Scenario: Purchase Fuel and Car Wash Deal

Brief Description
Deal with buying fuel and car wash at the pump

4.3 Conformance XML Instance Document - Purchase Fuel and Car Wash Deal

```xml
<?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>
```

```xml
        <WorkstationID>POS5</WorkstationID>
        <SequenceNumber>4294967295</SequenceNumber>
        <POSLogDateTime TypeCode="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <OperatorID>John</OperatorID>
        <RetailTransaction>
            <LineItem>
                <!-- Fuel Purchase -->
                <FuelSale>
                    <POSIdentity POSIDType="SKU">
                        <POSItemID>123</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>15.00</ExtendedAmount>
                    <Quantity>12.35</Quantity>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <!-- Car Wash Voucher -->
                <StoredValueFundSale>
                    <ItemID>1234</ItemID>
                    <ExtendedAmount>5.00</ExtendedAmount>
                    <Instrument TypeCode="CarWashToken">
                        <FaceValueAmount>5.00</FaceValueAmount>
                        <SerialNumber>23564</SerialNumber>
                    </Instrument>
                </StoredValueFundSale>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender>
                    <Amount>20.00</Amount>
                </Tender>
                <SequenceNumber>3</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

4.4 Scenario: 2 Pass Transaction

Brief Description
There are 2 pass transactions – island sales are preauthorized then completed. That is,
you pay inside, the transaction gets stored. You then pump the gas and return inside to
finalize the transaction.

4.4a Conformance XML Instance Document –Pass 1 – Pre-Authorize Customer Order

```xml
<?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="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <CustomerOrderTransaction TransactionStatus="Suspended">
            <LineItem>
                <Tender TenderType="CreditDebit">
                    <Amount>1.00</Amount>
                    <Authorization PreAuthorizationFlag="true">
                        <AuthorizationCode>awser12</AuthorizationCode>
                    </Authorization>
                    <CreditDebit CardType="Credit" TypeCode="Visa">

    <PrimaryAccountNumber>4717*******6039</PrimaryAccountNumber>
                    </CreditDebit>
                </Tender>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
        </CustomerOrderTransaction>
    </Transaction>
</POSLog>
```

4.4b Conformance XML Instance Document –Pass 2 – Finalize Customer Order

```xml
<?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="Message">2001-08-
13T09:04:32</POSLogDateTime>
```

```xml
<RetailTransaction>
    <LineItem>
        <!-- Fuel Purchase -->
        <FuelSale>
            <POSIdentity POSIDType="SKU">
                <POSItemID>123</POSItemID>
            </POSIdentity>
            <ExtendedAmount>15.00</ExtendedAmount>
            <Quantity>12.35</Quantity>
        </FuelSale>
        <SequenceNumber>1</SequenceNumber>
    </LineItem>
    <LineItem>
        <Tender TenderType="CreditDebit">
            <Amount>12.35</Amount>
            <Authorization>
                <AuthorizationCode>awser12</AuthorizationCode>
            </Authorization>
            <CreditDebit CardType="Credit" TypeCode="Visa">

    <PrimaryAccountNumber>4717*******6039</PrimaryAccountNumber>
            </CreditDebit>
        </Tender>
        <SequenceNumber>2</SequenceNumber>
    </LineItem>
</RetailTransaction>
</Transaction>
</POSLog>
```

5. Use Case: Fuel Sale Tender

Data elements
- Customer number
- Driver number (s)
- Need to be able to report Mileage
- License plate
- Loyalty Card Name
- Loyalty needs to be multiple because there can be two loyalty cards swiped for a single transaction

5.1 Scenario: Electronic Toll Collection Systems

Brief Description
Pay in Advance, Pre Pay Cards, Electronic Toll Collection System (ETC) – track by when money is put on account.

Customer drives thru and uses ETC to pay for his gasoline purchase.

5.1 Conformance XML Instance Document - Electronic Toll Collection Systems

```xml
<?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>Dispenser1</WorkstationID>
        <SequenceNumber>4294967295</SequenceNumber>
        <POSLogDateTime TypeCode="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <RetailTransaction>
            <LineItem>
                <FuelSale>
                    <!-- gasoline -->
                    <POSIdentity>
                        <POSItemID>1234</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>10.00</ExtendedAmount>
                    <Quantity UnitOfMeasureCode="GLL">5</Quantity>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender TenderType="ElectronicTollCollection">
                    <Amount>10.00</Amount>
```

```
                <ElectronicTollCollection>
                    <AccountID>12093487</AccountID>
                </ElectronicTollCollection>
            </Tender>
            <SequenceNumber>2</SequenceNumber>
        </LineItem>
    </RetailTransaction>
    </Transaction>
</POSLog>
```

5.2 Scenario: Fleet Card Purchase

Brief Description
Kinds of sales restrictions on fleet card.
- Only allowed to buy diesel
- Not allowed to buy other items
- Tied to license number
- Velocity Limit (3 transaction per day)

5.2 Conformance XML Instance Document - Fleet Card 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="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <RetailTransaction>
            <LineItem>
                <!-- Fuel Purchase -->
                <FuelSale>
                    <POSIdentity POSIDType="SKU">
                        <POSItemID>123</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>15.00</ExtendedAmount>
                    <Quantity>12.35</Quantity>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender TenderType="CreditDebit">
                    <Amount>20.00</Amount>
```

```xml
                    <Authorization PreAuthorizationFlag="true">
                        <AuthorizationCode>awser12</AuthorizationCode>
                    </Authorization>
                    <CreditDebit CardType="Fleet" TypeCode="Visa">

        <PrimaryAccountNumber>4717*******6039</PrimaryAccountNumber>
                        <FleetInformation>
                            <DriverID>2341234</DriverID>
                        </FleetInformation>
                    </CreditDebit>
                </Tender>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

5.3 Scenario: Pay with Cash and Get Discount over Paying with Credit Card

Brief Description

Get minimal amount and pay with cash get some amount off

5.3 Conformance XML Instance Document - Pay with Cash and Get Discount over Paying with Credit Card

```xml
<?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>Dispenser1</WorkstationID>
        <SequenceNumber>4294967295</SequenceNumber>
        <POSLogDateTime TypeCode="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <RetailTransaction>
            <LineItem>
                <FuelSale>
                    <!-- gasoline -->
                    <POSIdentity>
                        <POSItemID>1234</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>10.00</ExtendedAmount>
                    <Quantity UnitOfMeasureCode="GLL">5</Quantity>
                    <RetailPriceModifier>
                        <SequenceNumber>1</SequenceNumber>
                        <Percent Action="Subtract">3</Percent>
```

```xml
                        <ReasonCode>Paid Cash</ReasonCode>
                    </RetailPriceModifier>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender>
                    <Amount>10.00</Amount>
                </Tender>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

6. Use Case: Other Situations

6.1 Scenario: Short payment

Brief Description
In petrol retailing where customers post-pay it is common for there to be short payments e.g. customer puts $20.20 fuel in their tank and then tender a $20 note.

Recording it as a Retail Price Modifier shows there is a discount (with reason). Now you can balance. You can track and report on these type and number of these events.

6.1 Conformance XML Instance Document – Short Payment

```xml
<?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="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <RetailTransaction>
            <LineItem>
                <!-- Fuel Purchase -->
                <FuelSale>
                    <POSIdentity POSIDType="SKU">
                        <POSItemID>123</POSItemID>
                    </POSIdentity>
                    <ActualSalesUnitPrice>20.20</ActualSalesUnitPrice>
                    <ExtendedAmount>20.00</ExtendedAmount>
                    <Quantity>12.35</Quantity>
                    <RetailPriceModifier>
                        <SequenceNumber>1</SequenceNumber>
                        <Amount Action="Subtract">.20</Amount>
                        <ReasonCode>Short Payment</ReasonCode>
                    </RetailPriceModifier>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender TenderType="CreditDebit">
                    <Amount>20.00</Amount>
                    <Authorization>
```

```
                    <AuthorizationCode>awser12</AuthorizationCode>
                </Authorization>
                <CreditDebit CardType="Credit">

    <PrimaryAccountNumber>4717*******6039</PrimaryAccountNumber>
                </CreditDebit>
            </Tender>
            <SequenceNumber>2</SequenceNumber>
        </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

6.2 Scenario: Drive Off

Brief Description

Scenario Description

A blue car, license plate number 2344567, filled up with 20 gal, $40.00, of gas and then drove off from My Special Store at 11:00am.

6.2 Conformance XML Instance Document – Drive Off

```
<?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>D1</WorkstationID>
        <SequenceNumber>4294967295</SequenceNumber>
        <POSLogDateTime TypeCode="Message">2001-08-
13T11:04:32</POSLogDateTime>
        <ForeCourtTransaction>
            <FuelPositionID>1</FuelPositionID>
            <DriveOff>
                <LicensePlateID>2344ABC</LicensePlateID>
                <VehicleDescription>blue car</VehicleDescription>
                <Quantity UnitOfMeasureCode="GLL">20</Quantity>
                <Amount Currency="USD">40.00</Amount>
            </DriveOff>
        </ForeCourtTransaction>
    </Transaction>
</POSLog>
```

6.3 Scenario: Drive Off – Missed Payment (V6.0)

Brief Description

Not all Drive Off situations are deliberate sometimes it is as simple as wife goes in to buy sweets, husband fills up and assumes that wife paid for fuel, too. Five minutes later they realize their mistake and return to pay. The transaction has been logged as a drive-off (stock loss), and can quickly be transformed into a Sale (stock loss recovery), but for the Sale we need the Item identity data logged, and everything logged gets output into POSLog.

For a drive off transaction to occur, there was a retail transaction underway and needs to be resolved in order to reconcile the books at the end of the day. So the drive off transaction deals with the fuel but the "incomplete" retail transaction deals with the money side.

Some of the elements for FuelSale should be available for general Forecourt use; these include POSIdentity, ItemID, MerchandiseHeirarchy and RegularSalesUnitPrice. These are included for several reasons: Stock Management might work using the Item Identity and without this cannot account for the PumpTest and DriveOff reduction in available stock, and also DriveOff can in some situations be resolved into a FuelSale if the customer returns after realizing a mistake was made; POS can recall the Drive Off event and convert it into a FuelSale, so the additional data is recorded for simple conversion into a sale.

Scenario Description

Customer gives $10 to the clerk then pumps $20 worth of gas. This produces both a cash tender line and a writeoff line.

6.3a Conformance XML Instance Document – Drive Off – Missed Payment

```xml
<?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>1</WorkstationID>
        <SequenceNumber>12345</SequenceNumber>
        <POSLogDateTime TypeCode="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <ForeCourtTransaction>
            <FuelPositionID>1</FuelPositionID>
            <DriveOff>
                <LicensePlateID>2344ABC</LicensePlateID>
                <VehicleDescription>blue car</VehicleDescription>
                <Quantity UnitOfMeasureCode="GLL">20</Quantity>
                <Amount Currency="USD">40.00</Amount>
            </DriveOff>
        </ForeCourtTransaction>
```

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

6.3b Conformance XML Instance Document – Drive Off – Missed Payment Transaction

```xml
<?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="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <OperatorID>John</OperatorID>
        <RetailTransaction>
            <LineItem>
                <!-- Missed Fuel Purchase -->
                <FuelSale ItemSubType="InComplete">
                    <POSIdentity POSIDType="SKU">
                        <POSItemID>123</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>15.00</ExtendedAmount>
                    <Quantity>12.35</Quantity>
                    <!-- Links to the unfinished drive off transaction -->
                    <TransactionLink>
                        <TransactionID>12346</TransactionID>
                    </TransactionLink>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Sale>
                    <ItemID>12366</ItemID>
                    <ExtendedAmount>5.00</ExtendedAmount>
                </Sale>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender>
                    <Amount>5.00</Amount>
                </Tender>
                <SequenceNumber>3</SequenceNumber>
            </LineItem>
        </RetailTransaction>
```

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

6.4 Scenario: Drive Off – Incomplete Payment (V6.0)

Brief Description

For a drive off transaction to occur, there was a retail transaction underway and needs to be resolved in order to reconcile the books at the end of the day. So the drive off transaction deals with the fuel but the "incomplete" retail transactions deals with the money side.

Scenario Description

Customer gives $10 to the clerk then pumps $20 of gas. This creates both a cash tender line and a writeoff line

6.3 Conformance XML Instance Document – Drive Off – Incomplete Payment

```xml
<?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="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <OperatorID>John</OperatorID>
        <RetailTransaction>
            <LineItem>
                <!-- Incomplete Fuel Purchase -->
                <FuelSale ItemSubType="InComplete">
                    <POSIdentity POSIDType="SKU">
                        <POSItemID>123</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>20.00</ExtendedAmount>
                    <Quantity>12.35</Quantity>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender>
                    <Amount>10.00</Amount>
                </Tender>
                <SequenceNumber>3</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
```

```
</POSLog>
```

6.5 Scenario: Pump Test (V6.0)

Brief Description

A pump test is performed by pumping a gallon (US) of gasoline into a specially marked container to verify the quantity pumped. In some cases the fuel is returned to the tank. A PumpTest doesn't necessarily return the full pumped volume back to the Tank – for example there might have been spillage, or as happens if there is suspected contamination a volume is taken from the PumpTestVolume for testing in a lab, therefore we need something to record a different volume being returned to the ReturnTank and a Reason for why the ReturnVolume is different. It would also be nice to have a PumpTestResult.

But due to environmental concerns, the tank can't be opened with out a delivery truck being presence. In this case the fuel is not returned.

Scenario Description

GI Tester, a government dispenser inspector, arrives at My Special Store to verify pumps are putting out the correct volume of petrol. He takes .9995 gallons from the mixed blend nozzle. After verification he returns it to the unleaded regular tank.

6.5 Conformance XML Instance Document – Pump Test

```xml
<?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>1</WorkstationID>
        <SequenceNumber>4294967295</SequenceNumber>
        <POSLogDateTime TypeCode="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <ForeCourtTransaction>
            <FuelPositionID>1</FuelPositionID>
            <TankID>2</TankID>
            <PumpTest>
                <PumpTestVolume
UnitOfMeasureCode="GLL">.9995</PumpTestVolume>
                <PumpTestReasonCode>yearly test</PumpTestReasonCode>
                <PumpTesterID>GI Tester</PumpTesterID>
            </PumpTest>
        </ForeCourtTransaction>
    </Transaction>
</POSLog>
```

7. Use Case: Tax exemption

7.1 Scenario: Off Road Use

Brief Description
Off road use doesn't pay federal tax – different color and high sulphur content.

7.1 Conformance XML Instance Document – Off Road Use

```xml
<?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="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <RetailTransaction>
            <LineItem>
                <!-- Fuel Purchase -->
                <FuelSale>
                    <POSIdentity POSIDType="SKU">
                        <POSItemID>123</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>15.00</ExtendedAmount>
                    <Quantity>12.35</Quantity>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tax>
                    <Amount>0</Amount>
                    <Percent>0</Percent>
                    <TaxExemption>
                        <CustomerExemptionID>12341234</CustomerExemptionID>
                        <ExemptTaxAmount>15.00</ExemptTaxAmount>
                        <ReasonCode>Off Road Use</ReasonCode>
                    </TaxExemption>
                </Tax>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender>
```

```
                    <Amount>15.00</Amount>
                </Tender>
                <SequenceNumber>3</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

8. Use Case: Cash Acceptors at the Pump

There are cash/note acceptors at the pump. Conceptually if entered $20 in acceptor, get $18 of gas, get $2 voucher

8.1 Scenario: Pay at Pump – Refund Inside

Brief Description
The customer puts the cash in and pumps the gas. The transaction is finalized. There is a paper printed and taken inside for refund. This requires the ability to link two transactions together. The one at the pump and the refund at the POS.

     a. Sometimes dealt with as change code (voucher similar to wash code) to be used to in the next transaction
     b. Sometimes an ATM type machine gives change immediately.
     c. Sometimes the cashier gives cash for the voucher.

8.1a Conformance XML Instance Document – Pay at Pump with Voucher Return

```xml
<?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="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <RetailTransaction>
            <LineItem>
                <!-- Fuel Purchase -->
                <FuelSale>
                    <POSIdentity POSIDType="SKU">
                        <POSItemID>123</POSItemID>
                    </POSIdentity>
                    <ExtendedAmount>18.00</ExtendedAmount>
                    <Quantity>12.35</Quantity>
                </FuelSale>
                <SequenceNumber>1</SequenceNumber>
            </LineItem>
            <LineItem>
                <Tender>
                    <Amount>20.00</Amount>
                </Tender>
                <SequenceNumber>2</SequenceNumber>
            </LineItem>
```

```
            <LineItem>
                <Tender TypeCode="Refund">
                    <Amount>2.00</Amount>
                    <Voucher>
                        <SerialNumber>12341234</SerialNumber>
                    </Voucher>
                </Tender>
                <SequenceNumber>3</SequenceNumber>
            </LineItem>
        </RetailTransaction>
    </Transaction>
</POSLog>
```

8.1b Conformance XML Instance Document – Refund Inside

```
<?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>1234</SequenceNumber>
        <POSLogDateTime TypeCode="Message">2001-08-
13T09:04:32</POSLogDateTime>
        <TenderControlTransaction>
            <PaidOut>
                <Amount>2.00</Amount>
                <Reason>cashed out voucher</Reason>
                <DocumentID TypeCode="Voucher">12341234</DocumentID>
            </PaidOut>
        </TenderControlTransaction>
    </Transaction>
</POSLog>
```

9. Document History

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