



ARTS POSLog V6.0

Volume 13: Voids and Cancels Technical Specification
February 10, 2014 – Last Call Working Draft

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1. Abstract

1.1 Overview

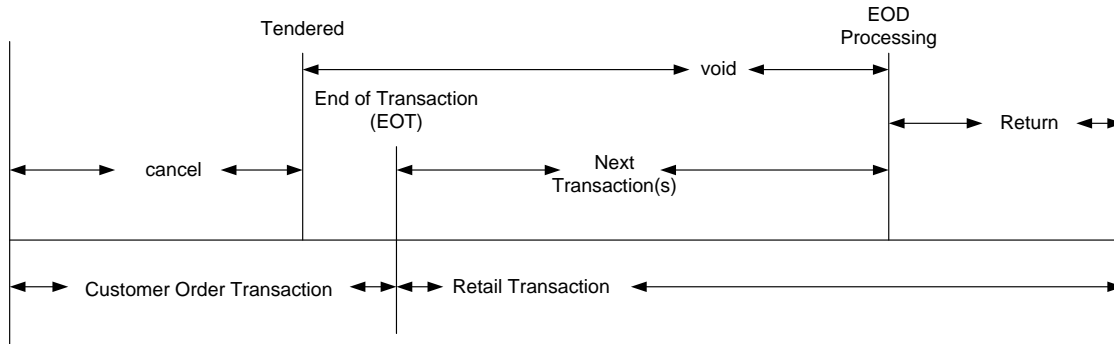


Figure 1: Cancel-Void Timing Diagram

Cancel	- Cancel is used to designate a transaction line or entire transaction that was reversed PRIOR to the tender of a transaction.
Void	- Transaction status designates an entire transaction that was reversed as part of a tendered transaction, that is, it is being voided in its entirety, - On a line item it designates a transaction line that was reversed after the transaction was tendered.
Return	- After the books are reconciled at the End of Day processing, then it must be a return. This way the books can balance.

The difference between voids/cancels and returns lies with financial accountability. A cancel general doesn't involve any money changing hands. When the tender occurs, there is money to track. When the transaction impacts the financial books, a return is in order.

Customer Order Transaction (no tender)

- Line Item CancelFlag = true ➔ indicates this line item was canceled. Item Link is not needed since it is this line item being canceled.

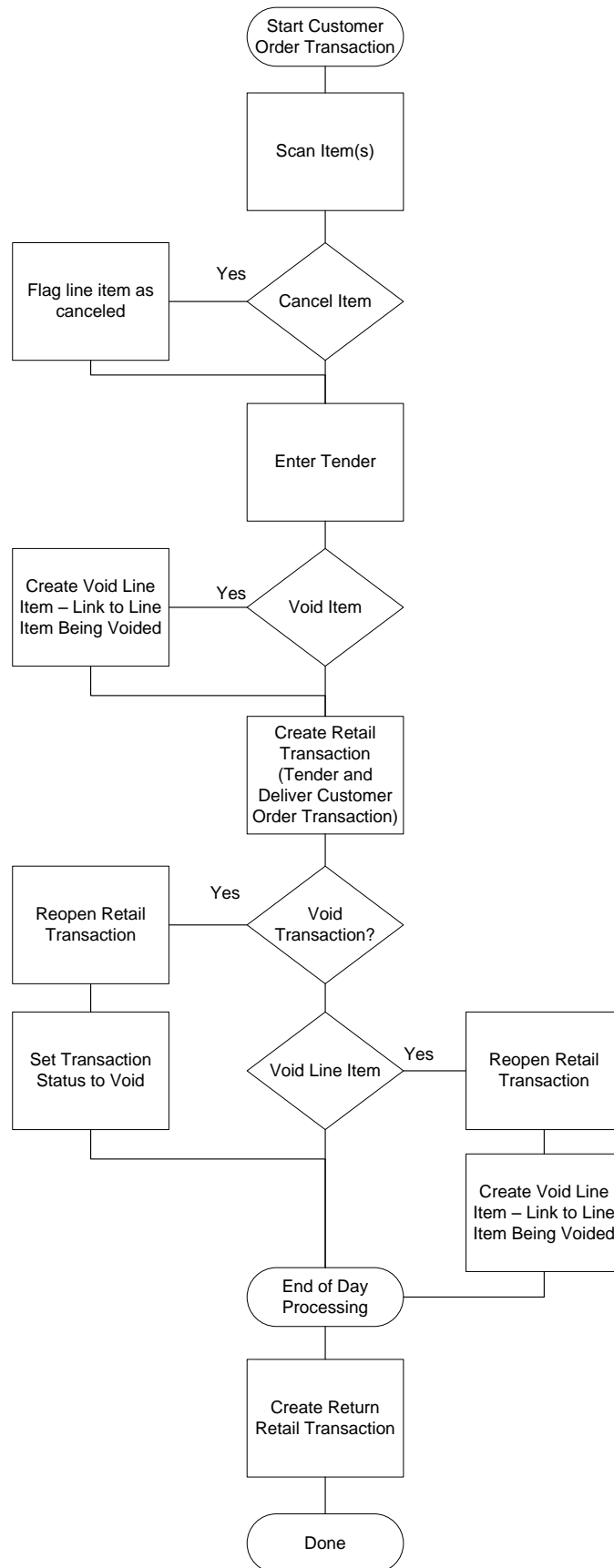
Customer Order Transaction (completely or partially tendered)

- Line Item VoidFlag = true ➔ indicates another line item was voided. Needs Item Link to show which line item is being voided.
- The Cancel Flag is in the message at this time because the item was canceled before tender was applied. Used to indicate the sequence of events for loss prevention.

Retail Transaction

- Transaction Status = Void only if the entire transaction is voided.

- Line Item VoidFlag = true ➔ indicates another line item was voided. Needs Item Link to show which line item is being voided.
- The Cancel Flag is in the message at this time because the item was canceled before tender was applied. Used to indicate the sequence of events for loss prevention.
- The sequence of events can be derived from the information embedded within the message.



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 <http://nrf.com>

3. ARTS Common Header

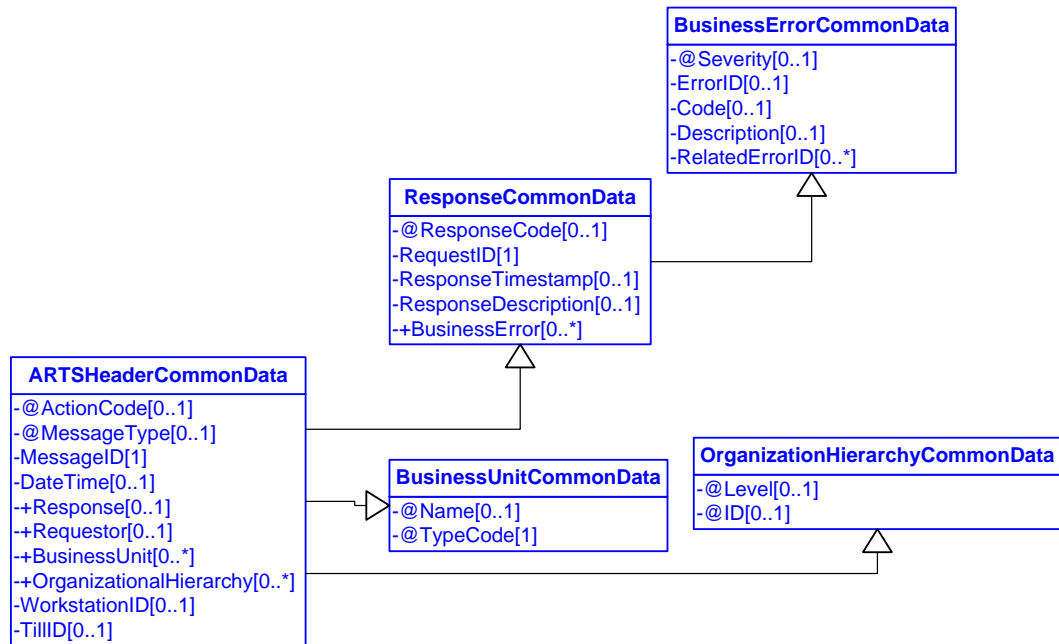


Figure 2: ARTS Common Header Domain View

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.

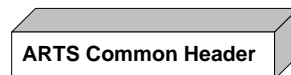


Figure 3: ARTS Common Header Representation

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: Voids & Cancels at the Transaction Level

4.1 Scenario: Cancel Transaction (V2.2)

Brief Description

In foodservice, a transaction is entered and suspended at the drive-thru. The customer drives away. The operator recalls the transaction and cancels the transaction. If configured for security, the manager will then need to enter a password before the cancelled transaction is processed. Additionally, if items were sent to the kitchen a transaction cancel request is sent to the kitchen. The password is required in this case because food items preparation has begun, and usually a ticket of some kind has been printed – these are prime theft opportunities and the manager involvement will help eliminate operator theft.

NOTE: a customer order transaction is a retail transaction before it is tendered and fulfilled.

Data

Another Brief Description

Cashier scans few items (before it tendered) but customer forgot his wallet at home so the cashier has to cancel the transaction.

Data

- The line item sale
- Ticket cancel

4.1 Conformance XML Instance Document – Cancel a Transaction

```
<?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>
    <OperatorID>John</OperatorID>
    <CustomerOrderTransaction TransactionStatus="Canceled">
      <LineItem>
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <ExtendedAmount>4.89</ExtendedAmount>
        </Sale>
        <SequenceNumber>1</SequenceNumber>
      </LineItem>
    </CustomerOrderTransaction>
  </Transaction>
</POSLog>
```

```
        </LineItem>
      </CustomerOrderTransaction>
    </Transaction>
  </POSLog>
```

4.2 Scenario: Void Transaction (V2.2)

Brief Description

Customer bought items, paid part with cash then wanted to use a credit card to complete the transaction. However, the card was forgotten at home so the entire transaction was voided and cash returned to customer.

Data

- The line item sale
- The line tender cash
- The cancel line tender cash
- Void Transaction

4.2 Conformance XML Instance Document – Void Transaction

```
<?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>
    <OperatorID>John</OperatorID>
    <RetailTransaction TransactionStatus="Voided"/>
  </Transaction>
</POSLog>
```

4.3 Scenario: Void Transaction with manager Approval (V6.0)

Brief Description

Customer bought items, paid part with cash then wanted to use a credit card to complete the transaction. However, the card was forgotten at home so the entire transaction was voided and cash returned to customer.

Void transaction function requires manager approval.

Data

- The line item sale
- The line tender cash
- The cancel line tender cash
- Void Transaction
- Manager approval

4.3 Conformance XML Instance Document – Void Retail Transaction with Manager Approval

```
<?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">
  <Transaction MajorVersion="6" MinorVersion="0" FixVersion="0">
    <BusinessUnit>
      <UnitID TypeCode="RetailStore">12</UnitID>
    </BusinessUnit>
    <WorkstationID TypeCode="POS">5</WorkstationID>
    <SequenceNumber>12345</SequenceNumber>
    <OperatorID OperatorName="John" OperatorType="Cashier"
WorkerID="029384757">205</OperatorID>
    <RetailTransaction TransactionStatus="Voided">
      <LineItem>
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <MerchandiseHierarchy
Level="Department">407</MerchandiseHierarchy>
          <Description>Coca Cola</Description>
          <RegularSalesUnitPrice>4.89</RegularSalesUnitPrice>
          <ExtendedAmount>4.89</ExtendedAmount>
          <Quantity>1</Quantity>
        </Sale>
        <SequenceNumber>1</SequenceNumber>
        <BeginDateTime>2011-11-11T20:20:20</BeginDateTime>
        <EndDateTime>2011-11-11T20:20:21</EndDateTime>
```

```
</LineItem>
<LineItem>
  <Tender TenderType="Cash" TypeCode="Sale">
    <Amount>1.00</Amount>
    <TenderID>1</TenderID>
  </Tender>
  <SequenceNumber>2</SequenceNumber>
  <BeginDateTime>2011-11-11T20:20:20</BeginDateTime>
  <EndDateTime>2011-11-11T20:20:21</EndDateTime>
</LineItem>
<LineItem VoidFlag="true">
  <Tender TenderType="Cash" TypeCode="Sale">
    <Amount>1.00</Amount>
    <TenderID>1</TenderID>
  </Tender>
  <SequenceNumber>3</SequenceNumber>
  <BeginDateTime>2011-11-11T20:25:20</BeginDateTime>
  <EndDateTime>2011-11-11T20:25:21</EndDateTime>
</LineItem>
</RetailTransaction>
<OperatorBypassApproval>
  <SequenceNumber>4</SequenceNumber>
  <ApproverID OperatorName="Manager name"
OperatorType="Manager">205</ApproverID>
  <Description>Void Transaction Approval </Description>
  <EntryMethod>Keyed</EntryMethod>
  <ApprovalDateTime>2011-11-11T20:21:20</ApprovalDateTime>
</OperatorBypassApproval>
</Transaction>
</POSLog>
```

4.4 Scenario: Partial Payment Cancel Customer Order Transaction (V6)

Brief Description

Customer bought items, paid part with cash then wanted to use a gift card to complete the transaction. However, the card was forgotten at home so the entire transaction was voided and cash returned to customer.

The use of the gift card must be canceled and cash returned. Add Reversal to the Tender Type Code to reflect this tender was reversed.

Data

- The line item sale
- The line tender cash
- The cancel line tender gift card
- Void Transaction
- Manager approval

4.4 Conformance XML Instance Document – Partial Payment Cancel Customer Order Transaction

```
<?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>
    <OperatorID>John</OperatorID>
    <CustomerOrderTransaction>
      <LineItem>
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <ExtendedAmount>4.89</ExtendedAmount>
        </Sale>
        <SequenceNumber>1</SequenceNumber>
      </LineItem>
      <LineItem>
        <Tender TenderType="GiftCard">
          <Amount>4.00</Amount>
          <GiftCard>
            <CardNumber>234234</CardNumber>
          </GiftCard>
        </Tender>
        <SequenceNumber>2</SequenceNumber>
      </LineItem>
      <LineItem CancelFlag="true">
        <Tender TypeCode="Refund" TenderType="GiftCard">
          <Amount>4.00</Amount>
        </Tender>
        <SequenceNumber>3</SequenceNumber>
        <ItemLink>1</ItemLink>
        <OperatorBypassApproval>
          <SequenceNumber>1</SequenceNumber>
          <ApproverID>87655678</ApproverID>
        </OperatorBypassApproval>
      </LineItem>
    </CustomerOrderTransaction>
  </Transaction>
</POSLog>
```

5. USE CASE: Void & Cancel at the Line Item Level

5.1 Scenario: Cancel a Line Item (V2.2)

Brief Description

Customer, after the cashier rings up the shirt, decides he doesn't want it. So the cashier cancels the line item containing the shirt.

Data

- The shirt line item
- The cancel line item pointing to the shirt

5.1 Conformance XML Instance Document – Cancel a Line 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>
    <OperatorID>John</OperatorID>
    <CustomerOrderTransaction>
      <LineItem>
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <ExtendedAmount>4.89</ExtendedAmount>
        </Sale>
        <SequenceNumber>1</SequenceNumber>
      </LineItem>
      <LineItem CancelFlag="true">
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <ExtendedAmount>4.89</ExtendedAmount>
          <ItemLink>1</ItemLink>
        </Sale>
        <SequenceNumber>2</SequenceNumber>
      </LineItem>
    </CustomerOrderTransaction>
  </Transaction>
</POSLog>
```

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

5.2 Scenario: Void a Retail Transaction Line Item (V2.2)

Brief Description

Customer purchases a drink and a shirt; after the cashier rings up the items, customer decides he doesn't want the Shirt. After the retail transaction is finished, the cashier reopens the transaction and selects Void Function and Void the "Shirt" item.

Data

The shirt line item

The Cola line

The void line item pointing to the shirt line (ItemLink)

NOTE the VoidFlag on the individual line item and the item link to the line item being voided.

5.2 Conformance XML Instance Document - Void a Line 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 TypeCode="RetailStore">12</UnitID>
    </BusinessUnit>
    <WorkstationID TypeCode="POS">5</WorkstationID>
    <SequenceNumber>12345</SequenceNumber>
    <OperatorID OperatorName="John" OperatorType="Cashier"
      WorkerID="029384757">205</OperatorID>
    <RetailTransaction>
      <LineItem>
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <Description>T-Shirt</Description>
          <ExtendedAmount>9.99</ExtendedAmount>
        </Sale>
        <SequenceNumber>1</SequenceNumber>
      </LineItem>
      <LineItem>
        <Sale ItemType="Stock">
          <POSIdentity>
```

```
        <POSItemID>24</POSItemID>
      </POSIdentity>
      <Description>Cola</Description>
      <ExtendedAmount>1.00</ExtendedAmount>
    </Sale>
    <SequenceNumber>2</SequenceNumber>
  </LineItem>
  <LineItem VoidFlag="true">
    <Sale ItemType="Stock">
      <POSIdentity>
        <POSItemID>01234567890123</POSItemID>
      </POSIdentity>
      <Description>T-Shirt</Description>
      <ExtendedAmount>9.99</ExtendedAmount>
      <ItemLink>1</ItemLink>
    </Sale>
    <SequenceNumber>3</SequenceNumber>
  </LineItem>
  <LineItem>
    <Tender TenderType="Cash" >
      <Amount>1.00</Amount>
    </Tender>
    <SequenceNumber>4</SequenceNumber>
  </LineItem>
</RetailTransaction>
</Transaction>
</POSLog>
```

5.3 Scenario: Void a Retail Transaction Line Item with Manager Approval (V6.0)

Brief Description

Customer purchases a drink and a shirt; after the cashier rings up the items, customer decides he doesn't want the Shirt. After the retail transaction is finished, the cashier reopens the transaction and selects Void Function and Void the "Shirt" item.

The Void function requires a manager approval.

Data

The shirt line item

The Cola line

Void Line Function with manager approval

Note the void flag on the line item., the void line item pointing to the shirt line (ItemLink)

5.3 Conformance XML Instance Document - Void a Line Item with Manager Approval

```
<?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">
    <Transaction MajorVersion="6" MinorVersion="0" FixVersion="0">
      <BusinessUnit>
        <UnitID TypeCode="RetailStore">12</UnitID>
      </BusinessUnit>
      <WorkstationID TypeCode="POS">5</WorkstationID>
      <SequenceNumber>12345</SequenceNumber>
      <OperatorID OperatorName="John" OperatorType="Cashier"
WorkerID="029384757">205</OperatorID>
      <RetailTransaction>
        <LineItem>
          <Sale ItemType="Stock">
            <POSIdentity>
              <POSItemID>01234567890123</POSItemID>
            </POSIdentity>
            <Description>T-Shirt</Description>
            <ExtendedAmount>9.99</ExtendedAmount>
          </Sale>
          <SequenceNumber>1</SequenceNumber>
        </LineItem>
        <LineItem>
          <Sale ItemType="Stock">
            <POSIdentity>
              <POSItemID>24</POSItemID>
            </POSIdentity>
            <Description>Cola</Description>
            <ExtendedAmount>1.00</ExtendedAmount>
          </Sale>
          <SequenceNumber>2</SequenceNumber>
        </LineItem>
        <LineItem VoidFlag="true">
          <Sale ItemType="Stock">
            <POSIdentity>
              <POSItemID>01234567890123</POSItemID>
            </POSIdentity>
            <Description>T-Shirt</Description>
            <ExtendedAmount>9.99</ExtendedAmount>
            <ItemLink>1</ItemLink>
          </Sale>
          <SequenceNumber>3</SequenceNumber>
          <OperatorBypassApproval>
            <SequenceNumber>4</SequenceNumber>
            <ApproverID OperatorName="Manager name"
OperatorType="Manager">205</ApproverID>
            <Description>Void Line Item</Description>
            <EntryMethod>Keyed</EntryMethod>
            <ApprovalDateTime>2011-11-11T20:22:20</ApprovalDateTime>
          </OperatorBypassApproval>
        </LineItem>
      </RetailTransaction>
    </Transaction>
  </MajorVersion>
</xsd:schema>
```

```
<Tender TenderType="Cash" >  
  <Amount>1.00</Amount>  
</Tender>  
  <SequenceNumber>5</SequenceNumber>  
</LineItem>  
</RetailTransaction>  
</Transaction>  
</POSLog>
```

6. USE CASE: Void a Tender

Because Cancels occur before tender, there are no use cases for canceling a tender.

6.1 Scenario: Void Tender Interface (V6.0)

Brief Description

Scenario Description

Store manager needs to be able to void tender if the ticket is not completed and pay with another tender.

For example, when a transaction is partially tendered with Cash and customer want to void the cash and to pay with coupon instead

Data:

The Sale line item

Pay with partial tender cash

Void partial tender cash (with Item Link)

Pay with coupon tender

6.1 Conformance XML Instance Document - Void Tender Line 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 TypeCode="RetailStore">12</UnitID>
    </BusinessUnit>
    <WorkstationID TypeCode="POS">5</WorkstationID>
    <SequenceNumber>12345</SequenceNumber>
    <OperatorID OperatorName="John" OperatorType="Cashier"
WorkerID="029384757">205</OperatorID>
    <RetailTransaction>
      <LineItem>
        <Sale ItemType="Stock">
          <POSIdentity>
            <POSItemID>01234567890123</POSItemID>
          </POSIdentity>
          <Description>T-Shirt</Description>
          <ExtendedAmount>10.00</ExtendedAmount>
        </Sale>
        <SequenceNumber>1</SequenceNumber>
      </LineItem>
      <LineItem>
        <Tender TenderType="Cash">
          <Amount>5.00</Amount>
```

```
        </Tender>
        <SequenceNumber>2</SequenceNumber>
    </LineItem>
    <LineItem VoidFlag="true">
        <Tender TenderType="Cash">
            <Amount>5.00</Amount>
        </Tender>
        <SequenceNumber>3</SequenceNumber>
        <ItemLink>2</ItemLink>
    </LineItem>
    <LineItem>
        <Tender TenderType="Coupon">
            <Amount>10.00</Amount>
        </Tender>
        <SequenceNumber>4</SequenceNumber>
    </LineItem>
</RetailTransaction>
</Transaction>
</POSLog>
```

7. Document History

8. Version History

Version 1.0

Overview

New Features

Sections	Description of Change
	-

Minor fixes

Deprecation

Sections	Description of Change
	-

Compatibility/Dependencies Issues

Previous Document

9. GLOSSARY

Term	Definition