



# Informed Visibility™

## Mail Tracking & Reporting Mail.XML™ Guide

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# 1 Introduction

## 1.1 Purpose

This guide provides information about using Mail.XML™ to receive mail tracking data through the Informed Visibility™ (IV™) system. Through Mail.XML, mailers can receive visibility information for letter and flat containers and handling units (trays, tubs, and sacks).

Although IV provides visibility information for bundles and pieces, this information is not available via Mail.XML. Please see the *IV Mail Tracking & Reporting User Guide* for information about bundle and piece visibility. IV does not provide mail tracking data on packages or their associated containers, handling units, and bundles.

The intended audience for this guide is mailers and their technical support resources. This guide describes the Mail.XML mail tracking messages and how to get started with Mail.XML.

Additional documentation is available:

- *User Guide*: Describes the prerequisites for receiving mail tracking data through IV, the data provisioning options available in IV, how to use the application, and how to interpret scan data from IV; intended for mailers
- *External Facing Data Dictionary*: Describes the data attributes available in the external-facing IV system
- *Sample Data Set*: Provides example records of data attributes available in IV

## 1.2 Background

Prior to IV, mail tracking functionality for letters and flats, and their associated containers, handling units, and bundles, was distributed across several applications. IMb Tracing® (formerly CONFIRM®) was the source for automated piece and bundle tracking data, while *PostalOne!*® was the source for container and handling unit tracking data. Furthermore, the availability of tracking data was delayed, limiting usefulness to mailers.

Mailers did not have full visibility of mail as it moved through the mailstream because they were limited to actual scans of their containers, handling units, bundles, or pieces. As mailpieces are processed, they are nested, de-nested, and re-nested in and out of handling units and containers. There was not a system to capture all nesting relationships between mailpieces, handling units, and containers, which left gaps in end-to-end visibility.

Mail tracking functionality for letters and flats is consolidated into IV, the Postal Service's new and comprehensive mail data repository. IV provides near real-time tracking information for all letters, flats, and mail aggregates, which includes containers, handling units, and bundles.

IV will give mailers visibility into their mailings and service, increasing the value of mail and enabling mailers to plan their mailings, measure success of each mailing campaign, and efficiently staff. The system will provide several key benefits for mailers:

- Enhances visibility to provide end-to-end tracking across the entire mailstream – providing logical handling events and assumed handling events based on nesting associations
- Provides tracking information in near real-time, improving the timeliness for container and handling unit data
- Provides mailers with mailing-specific service scores
- Improved ease of use for mailers through flexible data provisioning (how you get data) and flexible data delegation (how you share data visibility)

### 1.3 IV Release Schedule

IV mail tracking functionality will be implemented through a phased approach. See the [IV RIBBS® page](#) for the release schedule.



## 2 Mail.XML Mail Tracking Messages

Users can receive data using Mail.XML messages through the following two options:

- Push messages (scheduled subscription)
- Pull messages (on-demand request)

### Notes:

- IV supports Mail.XML versions 12.0A, 12.0B, 14.0A, and 16.0. All of the XML Schema Definitions (XSDs) in this document are from version 16.0.
- *StartTheClockDelivery*, *StartTheClockNotification*, *StartTheClockQueryRequest*, and *StartTheClockQueryResponse* messages will be available in a future release.
- If you are new to using Mail.XML push or pull messages, see Section 3: *Getting Started with Mail.XML*.

### 2.1 Push Messages

Push messages are a set of Mail.XML Delivery and Notification messages. Customers can subscribe to either Delivery or Notification on a scheduled interval. If customer is subscribed to the Delivery option, all the available data is pushed to customer at the specified interval. If the customer is subscribed to the Notification option, a notification message is sent to customer indicating the available data at the specified interval, after which the customer can then pull the data based on the criteria provided in the Notification message.

The Mail.XML push subscription messages to be supported by IV are as follows:

- *ContainerVisibilityDelivery*: Postal Service sends detailed handling event data for containers and/or handling units matching subscription
- *ContainerVisibilityNotification*: Postal Service sends notification of available handling event data for containers and/or handling units
- *StartTheClockDelivery*: Postal Service sends detailed Start-the-Clock data for containers matching subscription (future release)
- *StartTheClockNotification*: Postal Service sends notification of available Start-the-Clock data for containers (future release)

Key data elements and related business rules for delivery messages (*ContainerVisibilityDelivery*) are defined below:

- **LargeTransactionDividerGroupOptionalType**: This datatype is created to allow breaking up of any large datasets into multiple transactions, with the Feet Ahead concept, where the sender of the large data set is providing information about how many total transactions to expect, and what is the current transaction number among the total expected transactions as part of this one business transaction.
  - **MessageGroupID**: A Sequence Number that will remain the same until all the transactions are completed. For example, MessageGroupID is 10 and remains 10 for all transactions, so the receiver knows that all the transactions with MessageGroupID 10 are part of one business transaction.
  - **TotalMessageCount**: This element tells the receiver that for MessageGroupID of 10, expect a total of X transactions. The X is always a positive integer.
  - **MessageSerialNumber**: For each message tied to the same MessageGroupID the value will increment, so the receiver will know if this is the 1st, 2nd, 3rd, etc. transaction out of the

TotalMessageCount for the given MessageGroupID. The value ranges from 1 to the TotalMessageCount.

- **TransmittedRecordCount:** A count of records in the current message transaction.
- **TotalRecordsAcrossMessages:** This is the total expected record count once the receiver for the given MessageGroupID has received all transactions.
- **LastMessage:** A Yes or No indicator confirming that this transaction is the last transaction of the MessageGroupID. For example, when MessageGroupID 10 has a TotalMessageCount value of 20 and the MessageSerialNumber becomes 20, the LastMessage would have a Yes indicator.
- **SubmittingParty:** IV will always put a value of “USPS” in the MaildatUserLicense field for all Notification and Delivery messages.
- **SubmittingSoftware:** IV will always put the following for all Notification and Delivery messages:
  - Value of “IV” in the SoftwareName element
  - Value of “USPS” in the Vendor element
  - Version number of Mail.XML used to send the message
  - No values in the ApprovalDate and ApprovalKey elements

The Customer Registration ID (CRID) element is for industry usage and is optional. For the Delivery messages, IV will not populate this element.

IV will provide the job information, either the Mail.dat Job ID and User License Code OR the Customer Group ID and MailingGroupID for Mail.XML to the customer.

IV will send one or more ContainerVisibility blocks containing one of the following ContainerScanState values:

- **Entered at USPS:** Container or Orphan Handling Unit inducted in Postal Service network (also the scan used for Start-the-Clock)
- **Enroute Arrive:** Container or handling unit arrived at a Postal Service facility or airport
- **Enroute:** Handling unit or bundle was processed at a Postal Service facility on sorting equipment
- **Enroute Depart:** Container or handling unit departed a Postal Service facility or airport

### 2.1.1 ContainerVisibilityDelivery

IV uses this data structure to report container or handling unit visibility data to the customer with all available *ContainerVisibilityEntry* data elements populated.

The XSD of *ContainerVisibilityDelivery* is shown below:

**Figure 2.1: ContainerVisibilityDelivery XML Schema Definition**

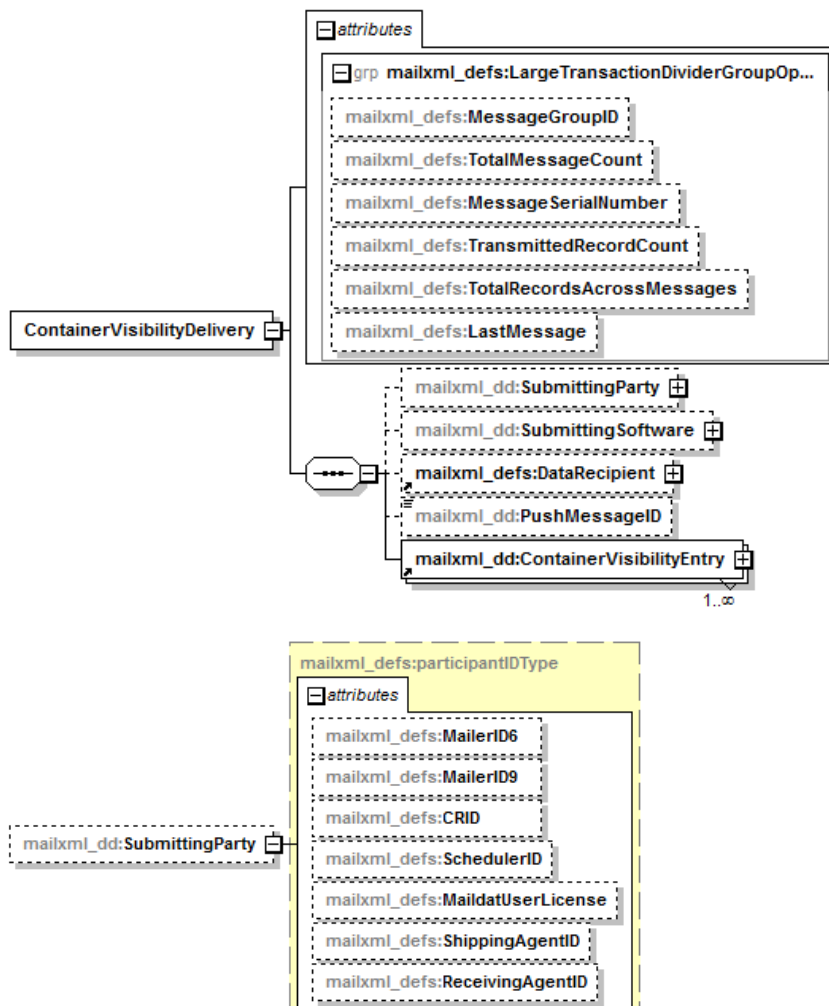
```

<xs:element name="ContainerVisibilityDelivery">
  <xs:annotation>
    <xs:documentation>Delivery of full service container visibility information by uSPS.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SubmittingParty" type="mailxml_defs:participantIDType" minOccurs="0"/>
      <xs:element name="SubmittingSoftware" type="mailxml_defs:submittingSoftwareType" minOccurs="0"/>
      <xs:element ref="mailxml_defs:DataRecipient" minOccurs="0"/>
      <xs:element name="PushMessageID" type="mailxml_base:s25" minOccurs="0"/>
      <xs:element ref="mailxml_dd:ContainerVisibilityEntry" minOccurs="1" maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:attributeGroup ref="mailxml_defs:LargeTransactionDividerGroupOptionalType"/>
  </xs:complexType>
</xs:element>

```

A visual representation of the XSD of *ContainerVisibilityDelivery* and its sub-components is shown below:

**Figure 2.2: ContainerVisibilityDelivery XSD Components**





## 2.1.2 ContainerVisibilityNotification

IV sends this notification to the customer and provides the job information for the container visibility data that is available for pickup.

The XSD of *ContainerVisibilityNotification* is shown below:

**Figure 2.3: ContainerVisibilityNotification XML Schema Definition**

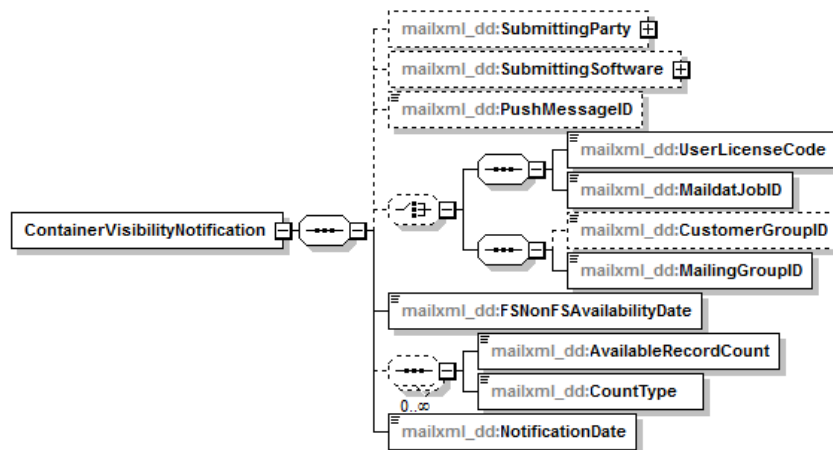
```

<xs:element name="ContainerVisibilityNotification">
  <xs:annotation>
    <xs:documentation>Notification sent by USPS that full service container visibility information is ready for pickup.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SubmittingParty" type="mailxml_defs:participantIDType" minOccurs="0"/>
      <xs:element name="SubmittingSoftware" type="mailxml_defs:submittingSoftwareType" minOccurs="0"/>
      <xs:element name="PushMessageID" type="mailxml_base:s25" minOccurs="0"/>
      <xs:choice minOccurs="0">
        <xs:sequence>
          <xs:element name="UserLicenseCode" type="mailxml_base:userLicenseCodeType"/>
          <xs:element name="MaildatJobID" type="mailxml_base:jobIDType"/>
        </xs:sequence>
        <xs:sequence>
          <xs:element name="CustomerGroupID" type="mailxml_base:s25" minOccurs="0"/>
          <xs:element name="MailingGroupID" type="xs:nonNegativeInteger"/>
        </xs:sequence>
      </xs:choice>
      <xs:element name="FSNonFSAvailabilityDate" type="xs:date"/>
      <xs:sequence minOccurs="0" maxOccurs="unbounded">
        <xs:element name="AvailableRecordCount" type="xs:nonNegativeInteger"/>
        <xs:element name="CountType" type="mailxml_dd:countTypeType"/>
      </xs:sequence>
      <xs:element name="NotificationDate" type="xs:date"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

A visual representation of the XSD of *ContainerVisibilityNotification* and its sub-components is shown below:

**Figure 2.4: ContainerVisibilityNotification XSD Components**





### 2.1.3 StartTheClockDelivery

**Note:** The *StartTheClockDelivery* message will be available in a future release.

IV uses this data structure to report container Start-the-Clock data to the customer with all available *StartTheClockDelivery* data elements populated.

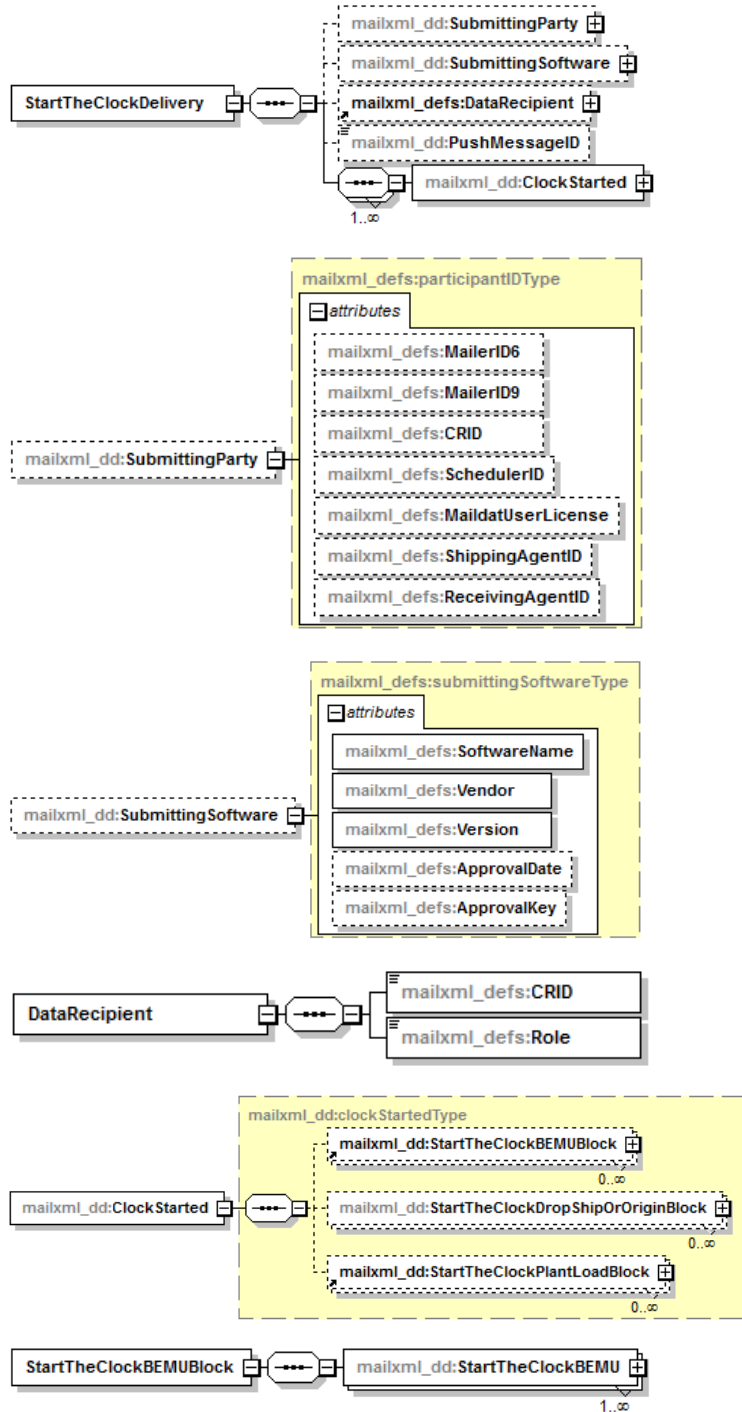
The XSD of *StartTheClockDelivery* is shown below:

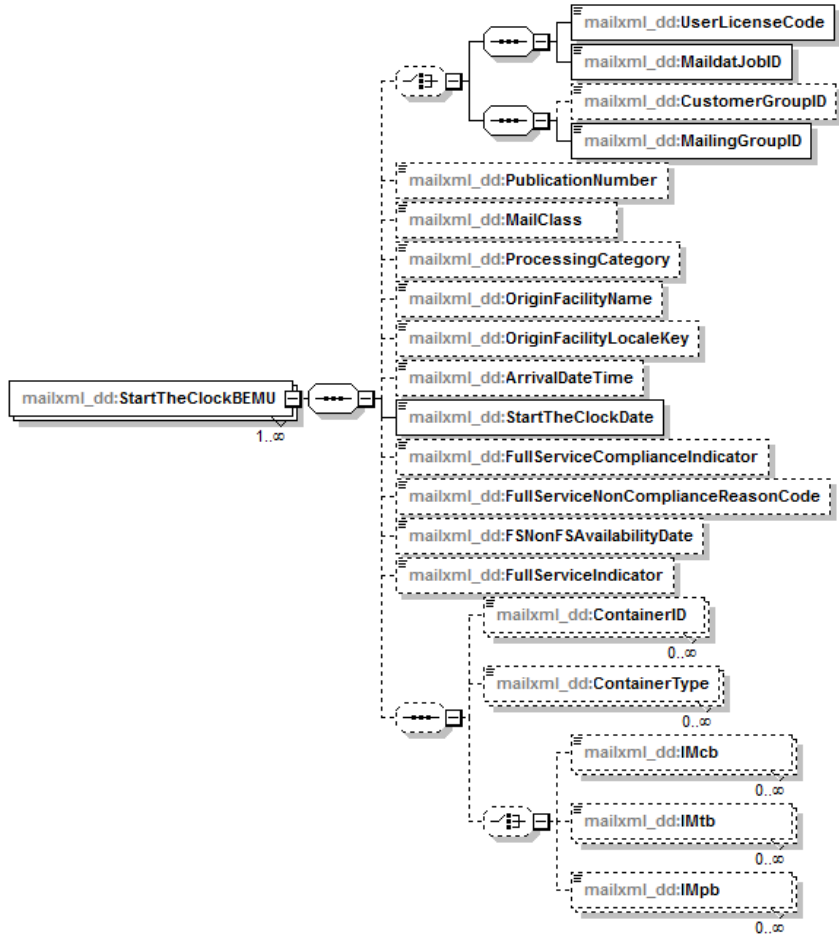
**Figure 2.5: StartTheClockDelivery XML Schema Definition**

```
<xs:element name="StartTheClockDelivery">
  <xs:annotation>
    <xs:documentation>Delivery of start the clock information to customer by USPS.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SubmittingParty" type="mailxml_defs:participantIDType" minOccurs="0"/>
      <xs:element name="SubmittingSoftware" type="mailxml_defs:submittingSoftwareType" minOccurs="0"/>
      <xs:element ref="mailxml_defs:DataRecipient" minOccurs="0"/>
      <xs:element name="PushMessageID" type="mailxml_base:s25" minOccurs="0"/>
      <xs:sequence maxOccurs="unbounded">
        <xs:element name="ClockStarted" type="mailxml_dd:clockStartedType"/>
      </xs:sequence>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

A visual representation of the XSD of *StartTheClockDelivery* and its sub-components is shown below:

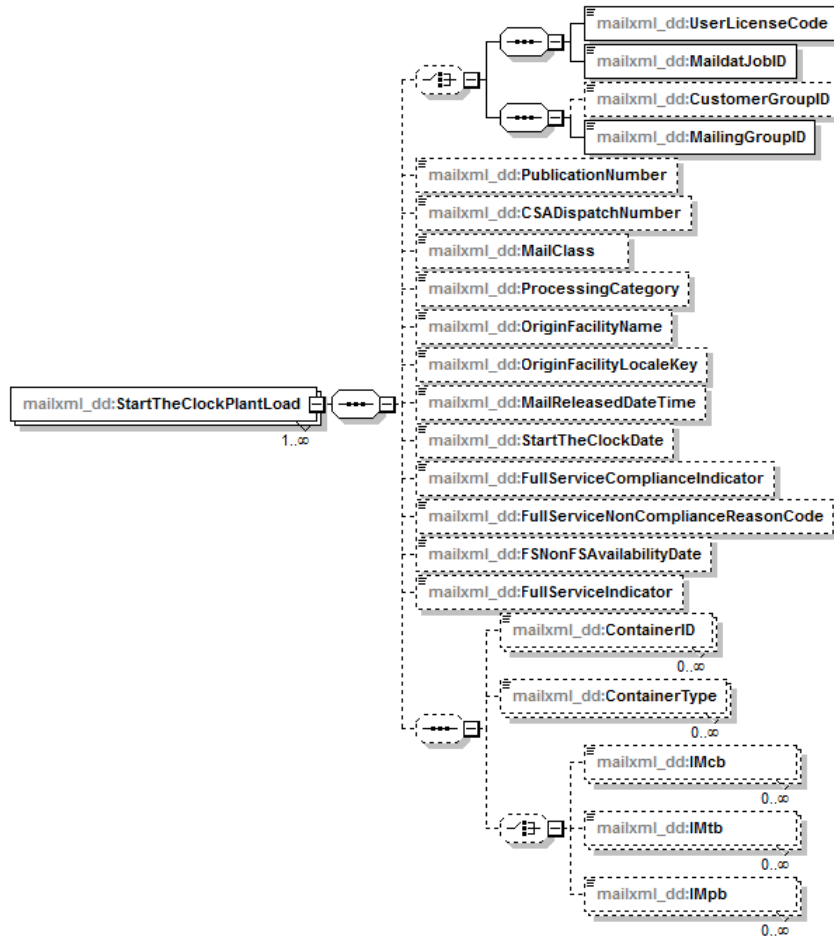
**Figure 2.6: StartTheClockDelivery XSD Components**











#### 2.1.4 StartTheClockNotification

**Note:** The *StartTheClockNotification* message will be available in in a future release.

IV sends this notification to the customer and provides the job information for the container Start-the-Clock data that is available for the customer to retrieve via query requests.

The XSD of *StartTheClockNotification* is shown below:

**Figure 2.7: StartTheClockNotification XML Schema Definition**

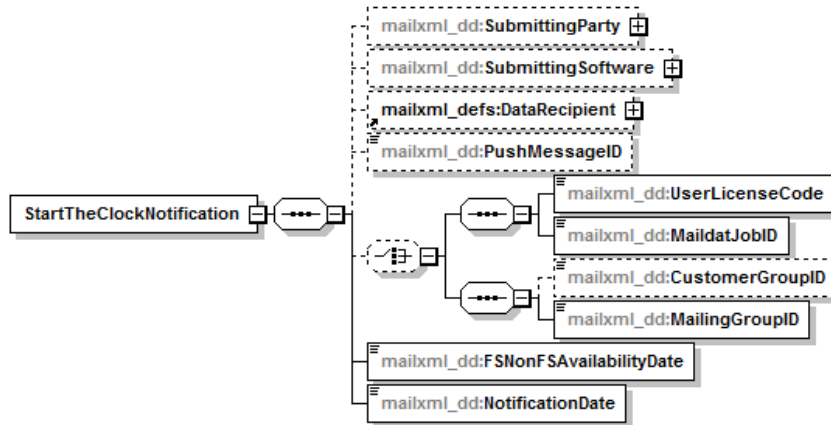
```

<xs:element name="StartTheClockNotification">
  <xs:annotation>
    <xs:documentation>Notification from USPS that start the clock information is ready to be picked up.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SubmittingParty" type="mailxml_defs:participantIDType" minOccurs="0"/>
      <xs:element name="SubmittingSoftware" type="mailxml_defs:submittingSoftwareType" minOccurs="0"/>
      <xs:element ref="mailxml_defs:DataRecipient" minOccurs="0"/>
      <xs:element name="PushMessageID" type="mailxml_base:s25" minOccurs="0"/>
      <xs:choice minOccurs="0">
        <xs:sequence>
          <xs:element name="UserLicenseCode" type="mailxml_base:userLicenseCodeType"/>
          <xs:element name="MaildatJobID" type="mailxml_base:jobIDType"/>
        </xs:sequence>
        <xs:sequence>
          <xs:element name="CustomerGroupID" type="mailxml_base:s25" minOccurs="0"/>
          <xs:element name="MailingGroupID" type="xs:nonNegativeInteger"/>
        </xs:sequence>
      </xs:choice>
      <xs:element name="FSNonFSAvailabilityDate" type="xs:date"/>
      <xs:element name="NotificationDate" type="xs:date"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

A visual representation of the XSD of *StartTheClockNotification* and its sub-components is shown below:

**Figure 2.8: StartTheClockNotification XSD Components**





## 2.2 Pull Messages

Customers can send a Web service-based Mail.XML request message invoking the Postal Service Web service to pull data in an XML format from IV. This allows the customer to retrieve information on an as-needed basis by using a set of specific criteria.

The Mail.XML pull request and response messages to be supported by IV are as follows:

- *ContainerVisibilityQueryRequest*: Mailer requests container or handling unit visibility information
- *ContainerVisibilityQueryResponse*: IV acknowledges the container or handling unit visibility request by providing the available data
- *StartTheClockQueryRequest*: Mailer requests container Start-the-Clock information (future release)
- *StartTheClockQueryResponse*: IV acknowledges the container Start-the-Clock request by providing the available data (future release)
- *MessageResponseRetrievalRequest*: Mailer requests container or handling unit visibility for the TrackingID provided in the request (used to retrieve batched groups of messages)
- *MessageResponseRetrievalResponse*: IV acknowledges the container or handling unit visibility request by providing the available data for the TrackingID provided in the request

If a large data set is being returned, IV returns a response with the first 200 messages. The response also provides one or more TrackingIDs as part of LargeTransactionDividerResult for the remaining messages. Whenever a mailer application sees the TrackingID element, the mailer application needs to send *MessageResponseRetrievalRequest* (using the correct Mail.XML version XSD) and use the TrackingID provided to get the response. For example, if a mailer sends *ContainerVisibilityQueryRequest* and IV has to send a large result set as a response, IV returns a response with the first 200 messages and includes five TrackingIDs as part of LargeTransactionDividerResult. The mailer sends a

*MessageResponseRetrievalRequest* request for each TrackingID to get the remaining data. Additionally, the element *LargeTransactionDividerGroupType* can give more information on what is included on each transmission.

Key data elements and related business rules for response messages (*ContainerVisibilityQueryResponse* and *StartTheClockQueryResponse*) are defined below:

- **LargeTransactionDividerGroupOptionalType:** This datatype is created to allow breaking up of any large datasets into multiple transactions, with the Feet Ahead concept, where the sender of the large data set is providing information about how many total transactions to expect, and what is the current transaction number among the total expected transactions as part of this one business transaction.
  - **MessageGroupID:** A Sequence Number that will remain the same until all the transactions are completed. For example, MessageGroupID is 10 and remains 10 for all transactions, so the receiver knows that all the transactions with MessageGroupID 10 are part of one business transaction.
  - **TotalMessageCount:** This element tells the receiver that for MessageGroupID of 10, expect a total of X transactions. The X is always a positive integer.
  - **MessageSerialNumber:** For each message tied to the same MessageGroupID the value will increment, so the receiver will know if this is the 1st, 2nd, 3rd, etc. transaction out of the TotalMessageCount for the given MessageGroupID. The value ranges from 1 to the TotalMessageCount.
  - **TransmittedRecordCount:** A count of records in the current message transaction.
  - **TotalRecordsAcrossMessages:** This is the total expected record count once the receiver for the given MessageGroupID has received all transactions.
  - **LastMessage:** A Yes or No indicator confirming that this transaction is the last transaction of the MessageGroupID. For example, when MessageGroupID 10 has a TotalMessageCount value of 20 and the MessageSerialNumber becomes 20, the LastMessage would have a Yes indicator.

### 2.2.1 ContainerVisibilityQueryRequest

Customers use this data structure to request container or handling unit visibility information from IV by providing the job information, appointment/trip information, facility ID, container or handling unit scan state, or Intelligent Mail container/tray barcodes.

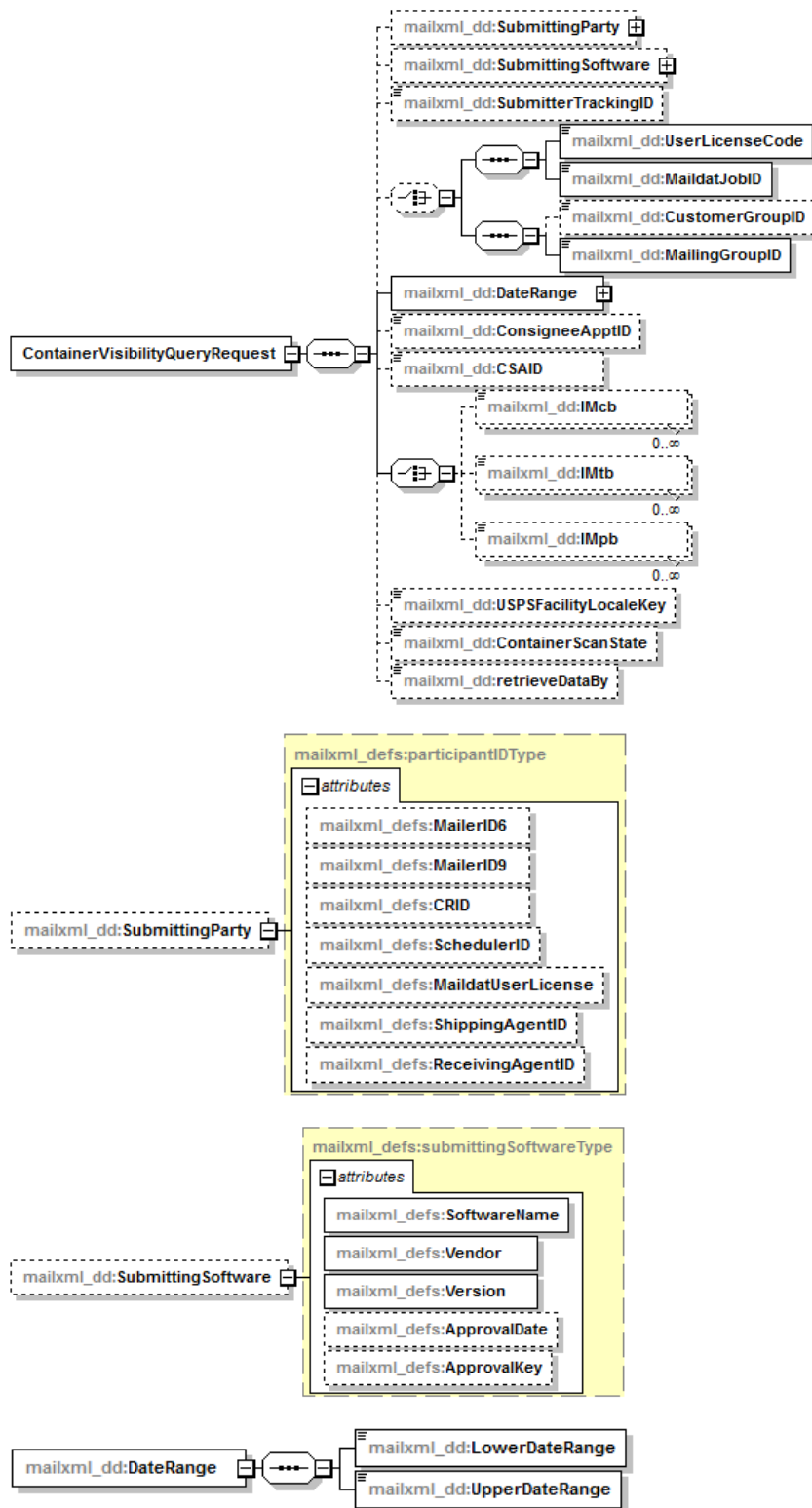
The XSD of *ContainerVisibilityQueryRequest* is shown below:

**Figure 2.9: ContainerVisibilityQueryRequest XML Schema Definition**

```
<xs:element name="ContainerVisibilityQueryRequest">
  <xs:annotation>
    <xs:documentation>Query request for for full service container visisbility information.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SubmittingParty" type="mailxml_defs:participantIDType" minOccurs="0"/>
      <xs:element name="SubmittingSoftware" type="mailxml_defs:submittingSoftwareType" minOccurs="0"/>
      <xs:element name="SubmitterTrackingID" type="mailxml_base:s20" minOccurs="0"/>
      <xs:choice minOccurs="0">
        <xs:sequence>
          <xs:element name="UserLicenseCode" type="mailxml_base:userLicenseCodeType"/>
          <xs:element name="MaildatJobID" type="mailxml_base:jobIDType"/>
        </xs:sequence>
        <xs:sequence>
          <xs:element name="CustomerGroupID" type="mailxml_base:s25" minOccurs="0"/>
          <xs:element name="MailingGroupID" type="xs:nonNegativeInteger"/>
        </xs:sequence>
      </xs:choice>
      <xs:element name="DateRange">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="LowerDateRange" type="xs:date"/>
            <xs:element name="UpperDateRange" type="xs:date"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="ConsigneeApptID" type="mailxml_base:s12" minOccurs="0"/>
      <xs:element name="CSAID" type="mailxml_base:s10" minOccurs="0"/>
      <xs:choice>
        <xs:element name="IMcb" type="mailxml_base:IMcbType" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="IMtb" type="mailxml_base:IMtbType" minOccurs="0" maxOccurs="unbounded"/>
        <xs:element name="IMpb" type="mailxml_base:IMpbType" minOccurs="0" maxOccurs="unbounded"/>
      </xs:choice>
      <xs:element name="USPSFacilityLocaleKey" type="mailxml_base:localeKeyType" minOccurs="0"/>
      <xs:element name="ContainerScanState" type="mailxml_dd:containerScanStateType" minOccurs="0"/>
      <xs:element name="retrieveDataBy" type="mailxml_dd:retrieveDataByType" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

A visual representation of the XSD of *ContainerVisibilityQueryRequest* and its sub-components is shown below:

**Figure 2.10: ContainerVisibilityQueryRequest XSD Components**



## 2.2.2 ContainerVisibilityQueryResponse

IV uses this data structure to respond to the customer's request with any available container or handling unit visibility data matching the request.

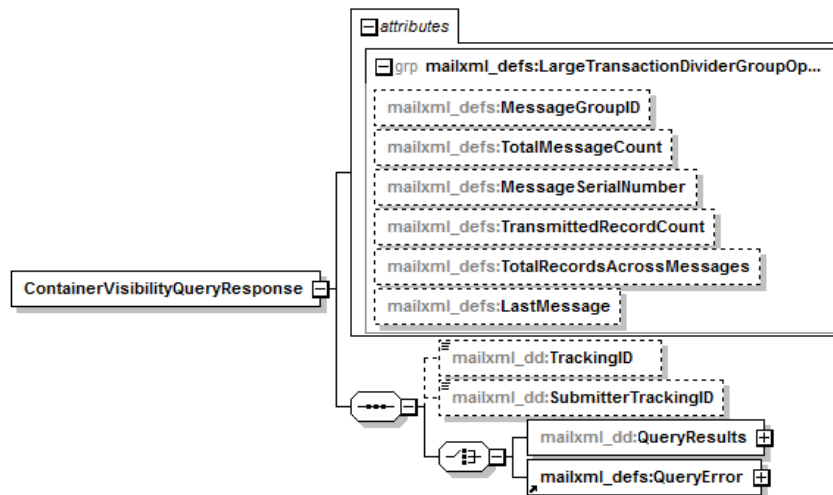
The XSD of *ContainerVisibilityQueryResponse* is shown below:

**Figure 2.11: ContainerVisibilityQueryResponse XML Schema Definition**

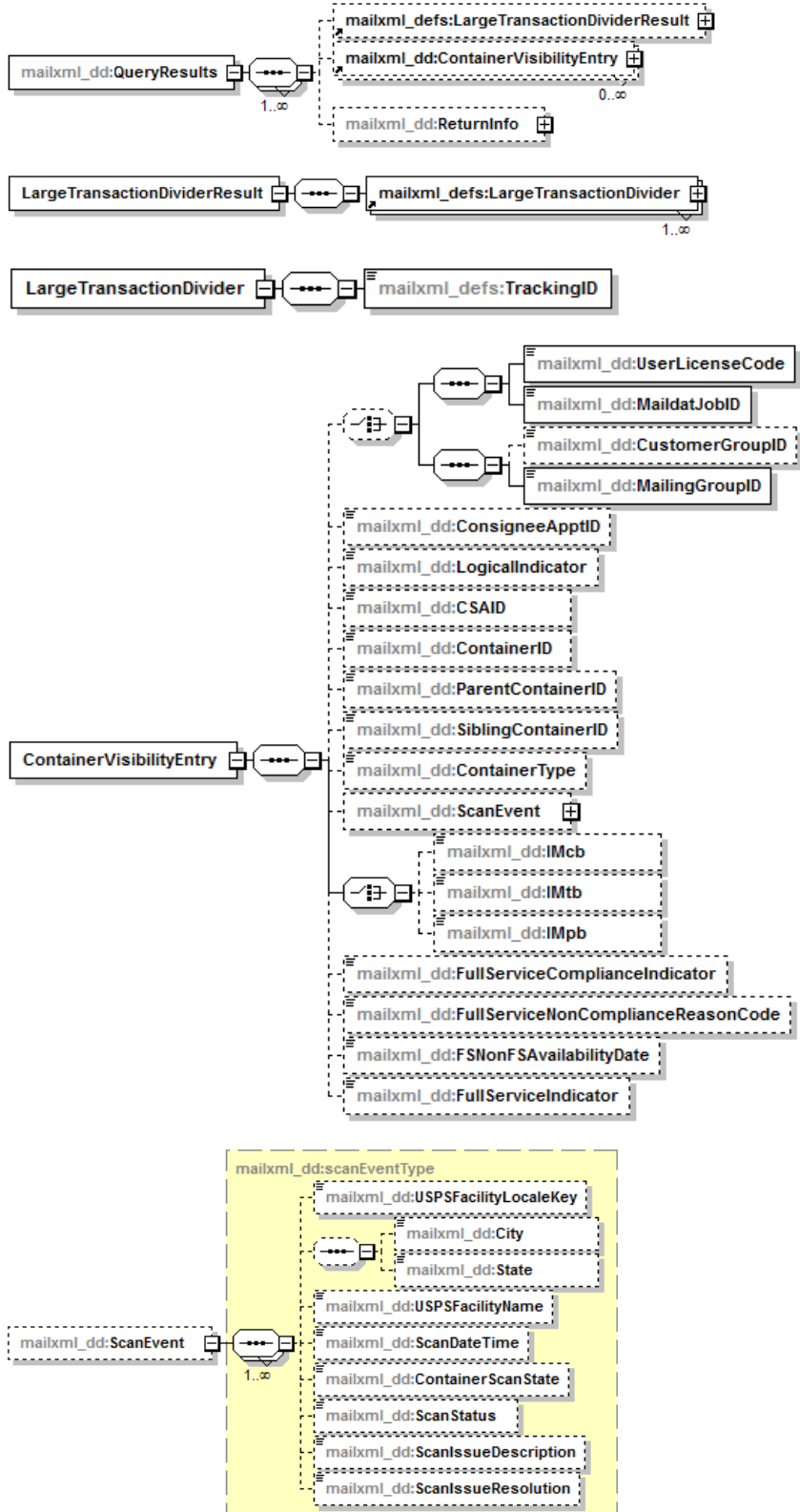
```
<xs:element name="ContainerVisibilityQueryResponse">
  <xs:annotation>
    <xs:documentation>Response to the Query request for for full service container visibility information.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="TrackingID" type="mailxml_base:s20" minOccurs="0"/>
      <xs:element name="SubmitterTrackingID" type="mailxml_base:s20" minOccurs="0"/>
      <xs:choice>
        <xs:element name="QueryResults">
          <xs:annotation>
            <xs:documentation/>
          </xs:annotation>
          <xs:complexType>
            <xs:sequence maxOccurs="unbounded">
              <xs:element ref="mailxml_defs:LargeTransactionDividerResult" minOccurs="0"/>
              <xs:element ref="mailxml_dd:ContainerVisibilityEntry" minOccurs="0" maxOccurs="unbounded"/>
              <xs:element name="ReturnInfo" type="mailxml_defs:basicReturnInfoType" minOccurs="0"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element ref="mailxml_defs:QueryError"/>
      </xs:choice>
    </xs:sequence>
    <xs:attributeGroup ref="mailxml_defs:LargeTransactionDividerGroupOptionalType"/>
  </xs:complexType>
</xs:element>
```

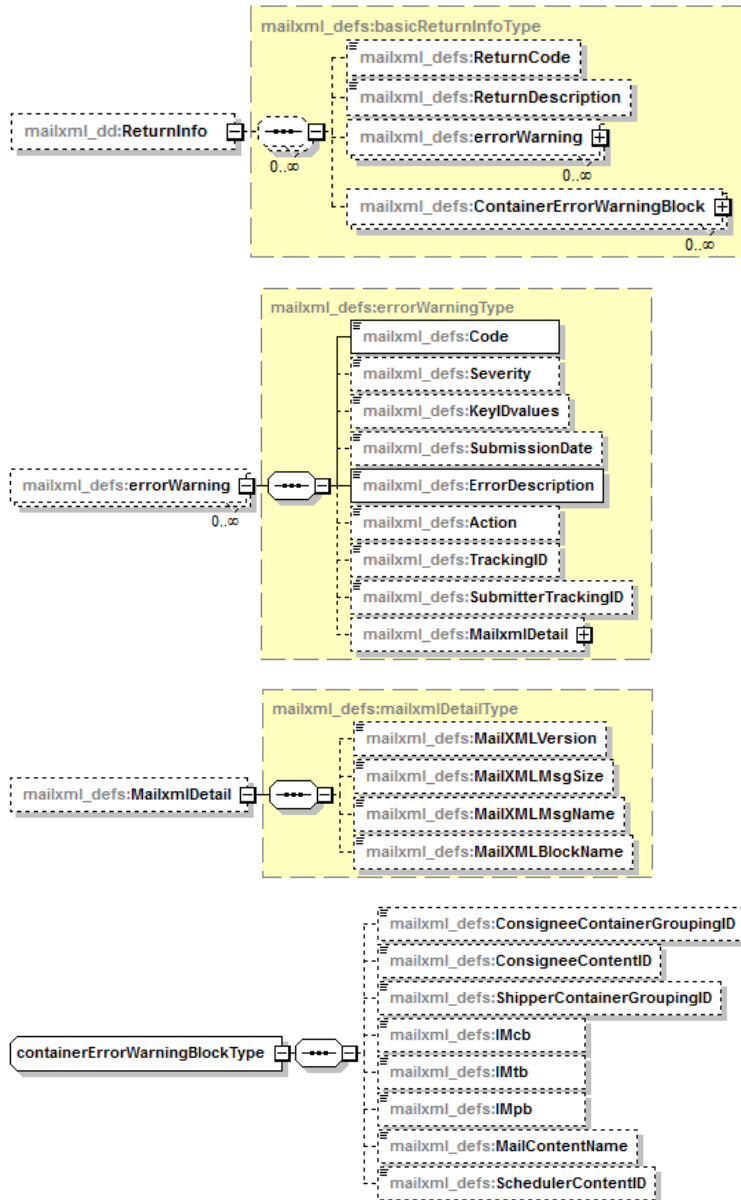
A visual representation of the XSD of *ContainerVisibilityQueryResponse* and its sub-components is shown below:

**Figure 2.12: ContainerVisibilityQueryResponse XSD Components**









### 2.2.3 StartTheClockQueryRequest

**Note:** The *StartTheClockQueryRequest* message will be available in a future release.

Customers use this data structure to request container Start-the-Clock information from IV by providing the job information.

The XSD of *StartTheClockQueryRequest* is shown below:

**Figure 2.13: StartTheClockQueryRequest XML Schema Definition**

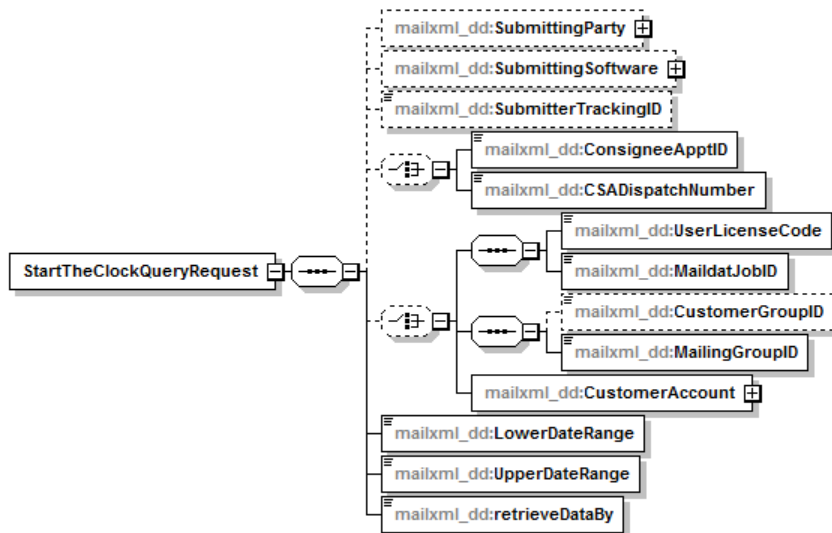
```

<xs:element name="StartTheClockQueryRequest">
  <xs:annotation>
    <xs:documentation>Query request for start the clock information.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SubmittingParty" type="mailxml_defs:participantIDType" minOccurs="0"/>
      <xs:element name="SubmittingSoftware" type="mailxml_defs:submittingSoftwareType" minOccurs="0"/>
      <xs:element name="SubmitterTrackingID" type="mailxml_base:s20" minOccurs="0"/>
      <xs:choice minOccurs="0">
        <xs:element name="ConsigneeApptID" type="mailxml_base:s12"/>
        <xs:element name="CSADispatchNumber" type="mailxml_base:s10"/>
      </xs:choice>
      <xs:choice minOccurs="0">
        <xs:sequence>
          <xs:element name="UserLicenseCode" type="mailxml_base:userLicenseCodeType"/>
          <xs:element name="MaildatJobID" type="mailxml_base:jobIDType"/>
        </xs:sequence>
        <xs:sequence>
          <xs:element name="CustomerGroupID" type="mailxml_base:s25" minOccurs="0"/>
          <xs:element name="MailingGroupID" type="xs:nonNegativeInteger"/>
        </xs:sequence>
        <xs:element name="CustomerAccount" type="mailxml_defs:permitPublicationDataType"/>
      </xs:choice>
      <xs:element name="LowerDateRange" type="xs:date"/>
      <xs:element name="UpperDateRange" type="xs:date"/>
      <xs:element name="retrieveDataBy" type="mailxml_dd:retrieveDataByType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

A visual representation of the XSD of *StartTheClockQueryRequest* and its sub-components is shown below:

**Figure 2.14: StartTheClockQueryRequest XSD Components**





## 2.2.4 StartTheClockQueryResponse

**Note:** The *StartTheClockQueryResponse* message will be available in a future release.

IV uses this data structure to respond to a customer's *StartTheClockQueryRequest* message with a *StartTheClockQueryResponse* message containing the container Start-the-Clock data that is available.

The XSD of *StartTheClockQueryResponse* is shown below:

**Figure 2.15: StartTheClockQueryResponse XML Schema Definition**

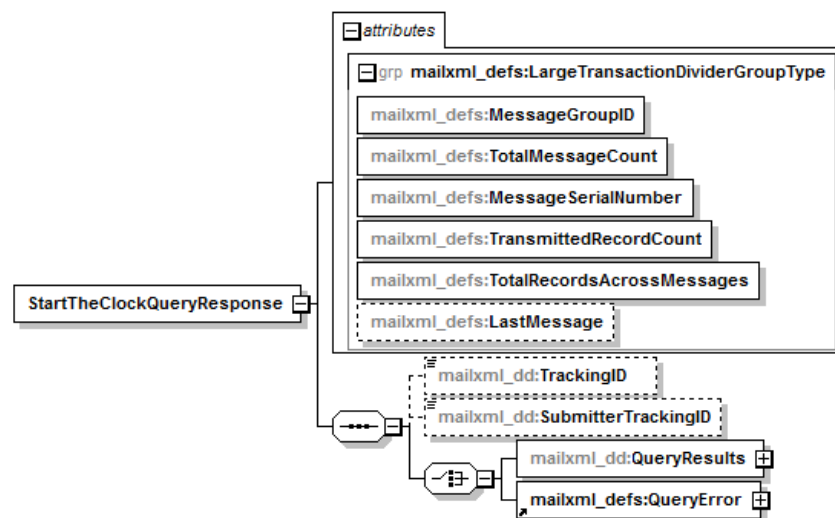
```

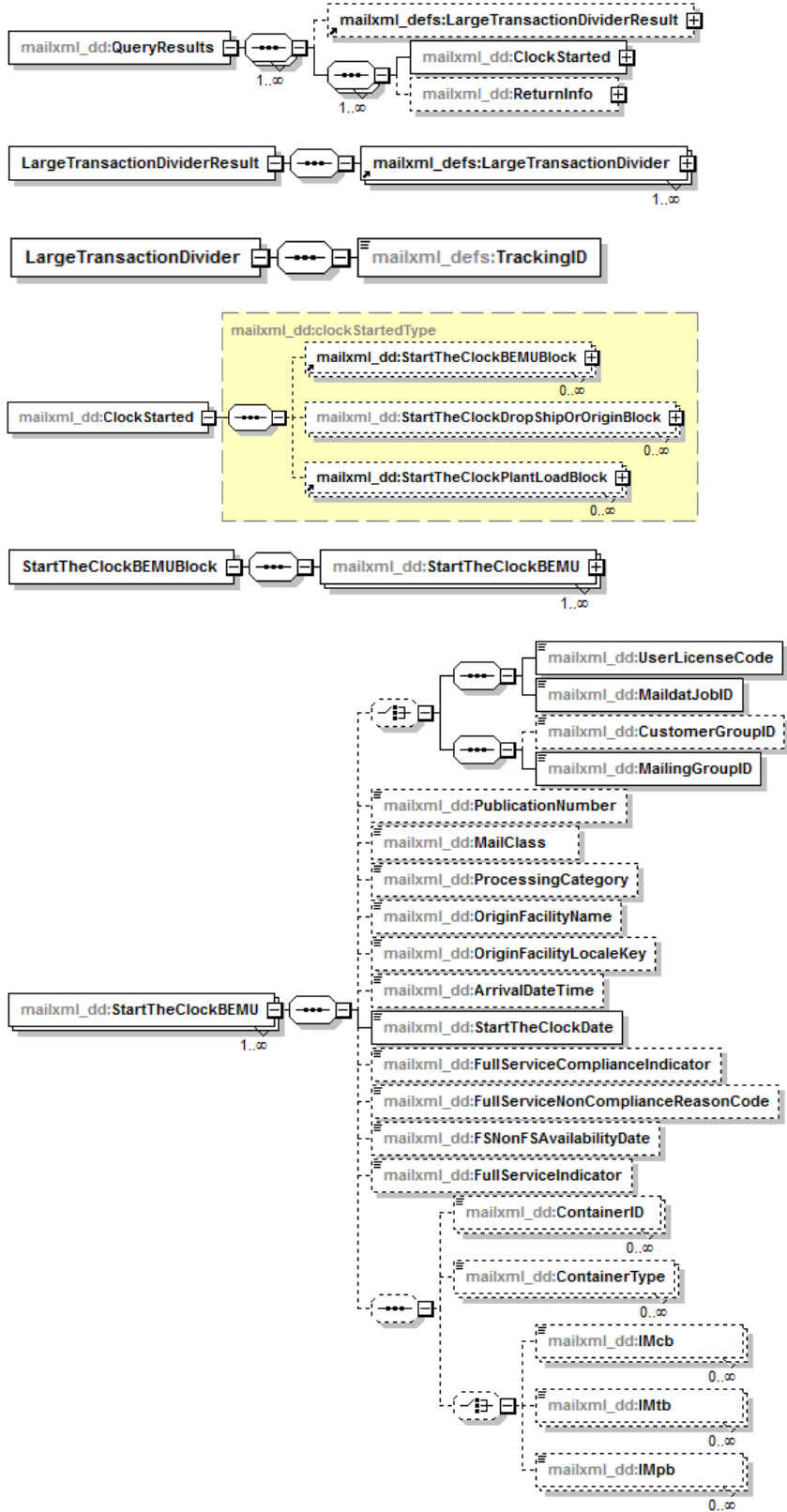
<xs:element name="StartTheClockQueryResponse">
  <xs:annotation>
    <xs:documentation>Response to the query for start the clock information.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="TrackingID" type="mailxml_base:s20" minOccurs="0"/>
      <xs:element name="SubmitterTrackingID" type="mailxml_base:s20" minOccurs="0"/>
      <xs:choice>
        <xs:element name="QueryResults">
          <xs:annotation>
            <xs:documentation/>
          </xs:annotation>
          <xs:complexType>
            <xs:sequence maxOccurs="unbounded">
              <xs:element ref="mailxml_defs:LargeTransactionDividerResult" minOccurs="0"/>
              <xs:sequence maxOccurs="unbounded">
                <xs:element name="ClockStarted" type="mailxml_dd:clockStartedType"/>
                <xs:element name="ReturnInfo" type="mailxml_defs:basicReturnInfoType" minOccurs="0"/>
              </xs:sequence>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element ref="mailxml_defs:QueryError"/>
      </xs:choice>
    </xs:sequence>
    <xs:attributeGroup ref="mailxml_defs:LargeTransactionDividerGroupType"/>
  </xs:complexType>
</xs:element>

```

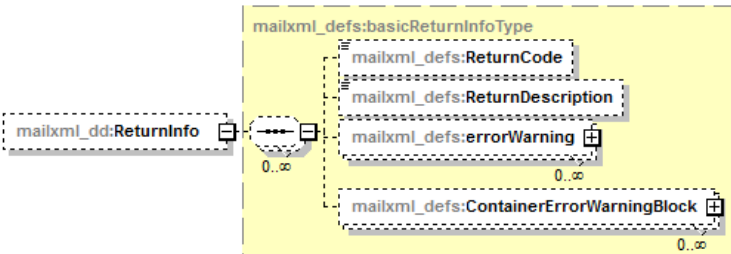
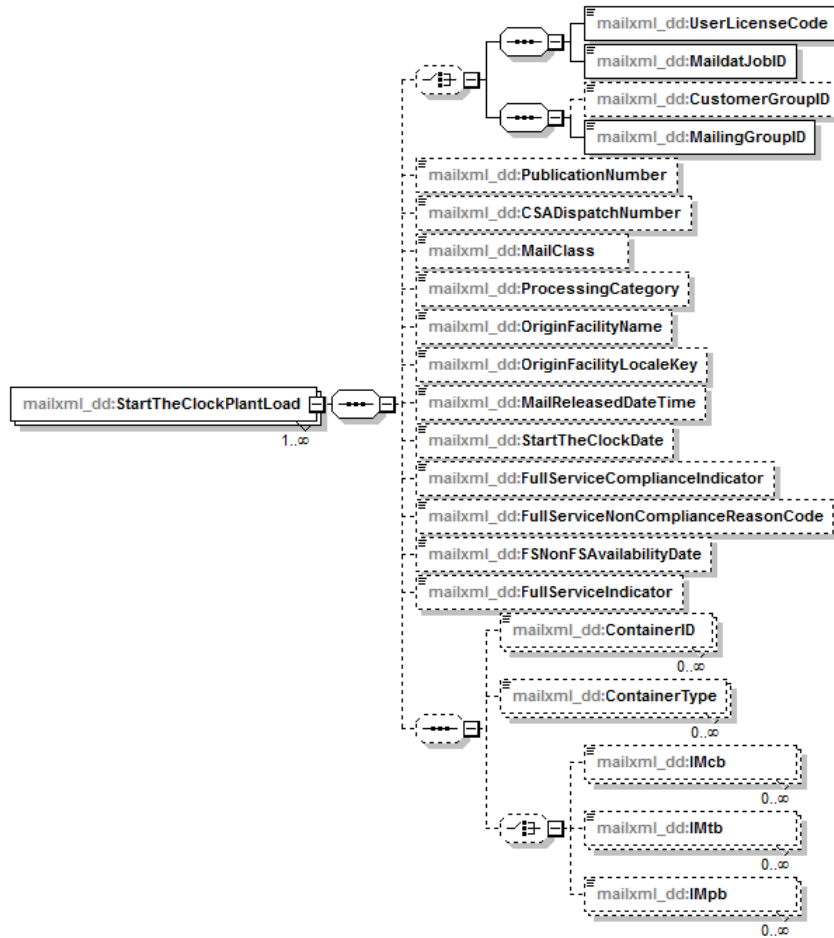
A visual representation of the XSD of *StartTheClockQueryResponse* and its sub-components is shown below:

**Figure 2.16: StartTheClockQueryResponse XSD Components**









## 2.2.5 MessageResponseRetrievalRequest

Customers use this data structure to request additional container or handling unit visibility data available based on the TrackingID provided in the request.



The XSD of *MessageResponseRetrievalRequest* is shown below:

**Figure 2.17: MessageResponseRetrievalRequest XML Schema Definition**

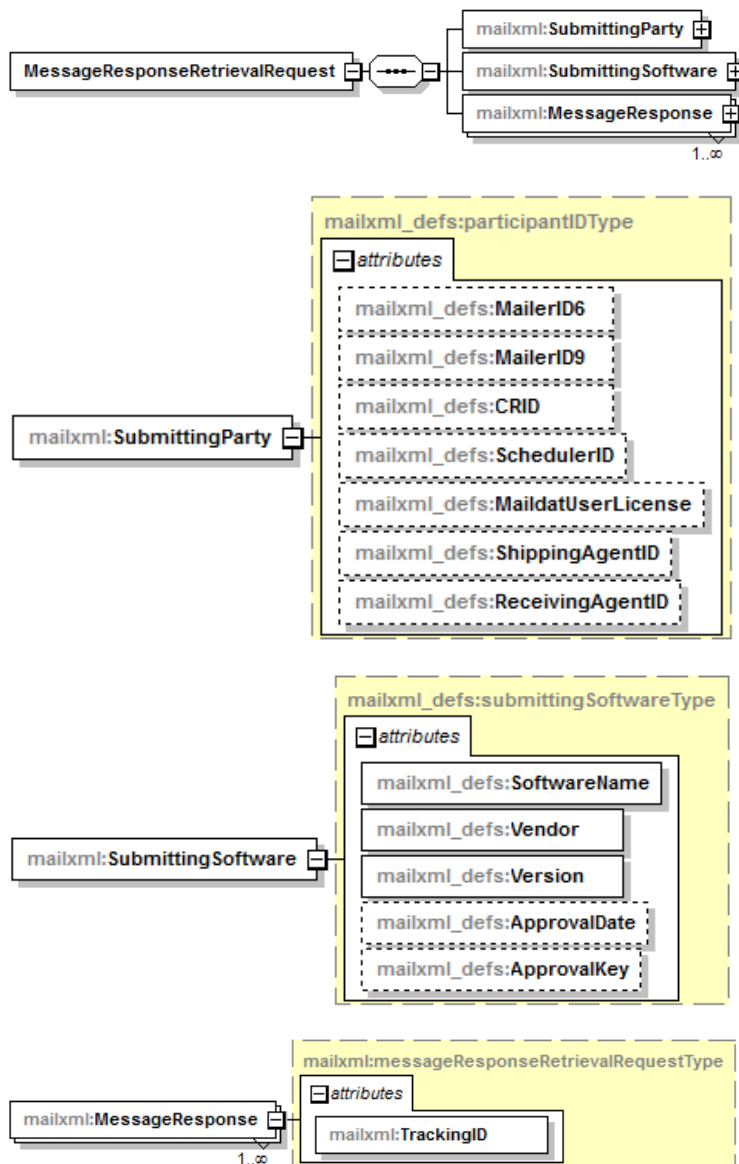
```

<xs:element name="MessageResponseRetrievalRequest">
  <xs:annotation>
    <xs:documentation>Request to send responses once more when the response was interrupted by a system fault.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="SubmittingParty" type="mailxml_defs:participantIDType"/>
      <xs:element name="SubmittingSoftware" type="mailxml_defs:submittingSoftwareType"/>
      <xs:element name="MessageResponse" type="mailxml:messageResponseRetrievalRequestType" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

A visual representation of the XSD of *MessageResponseRetrievalRequest* and its sub-components is shown below:

**Figure 2.18: MessageResponseRetrievalRequest XSD Components**



## 2.2.6 MessageResponseRetrievalResponse

IV uses this data structure to respond to the message retrieval request by providing the available container or handling unit data for the TrackingID provided in the request.

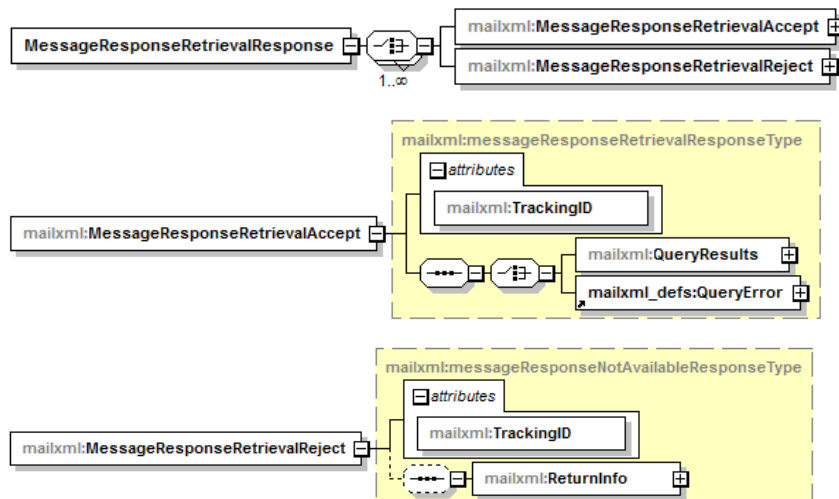
The XSD of *MessageResponseRetrievalResponse* is shown below:

**Figure 2.19: MessageResponseRetrievalResponse XML Schema Definition**

```
<xs:element name="MessageResponseRetrievalResponse" >
  <xs:annotation>
    <xs:documentation>Response to the Message Response Retrieval Request that resends interrupted responses.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:choice maxOccurs="unbounded">
      <xs:element name="MessageResponseRetrievalAccept" type="mailxml:messageResponseRetrievalResponseType"/>
      <xs:element name="MessageResponseRetrievalReject" type="mailxml:messageResponseNotAvailableResponseType"/>
    </xs:choice>
  </xs:complexType>
</xs:element>
```

A visual representation of the XSD of *MessageResponseRetrievalResponse* and its sub-components is shown below:

**Figure 2.20: MessageResponseRetrievalResponse XSD Components**



## 3 Getting Started with Mail.XML

### Notes:

- The information in this section pertains to users who are new to using Mail.XML to receive mail tracking information. For existing *PostalOne!* customers using Mail.XML to receive mail tracking information, separate migration instructions will be provided.
- It is assumed that users have technical resources available to assist in getting started with Mail.XML. This document can only provide general instructions because the specific details will vary based on your system and server configuration.
- IV supports Mail.XML versions 12.0A, 12.0B, 14.0A, and 16.0.

To use either Mail.XML push or pull messages, you must first complete the following steps. See the sections below for additional information about the steps for getting started:

**Table 3.1: Steps to Get Started with Mail.XML**

	Steps
Mail.XML Push	<ol style="list-style-type: none"><li>1. Download and install the IV Web Services Description Language (WSDL) file</li><li>2. Purchase and install a signed Secure Sockets Layer (SSL) certificate (Verisign or Comodo) on your servers</li><li>3. Register for the IV service through the Business Customer Gateway (BCG)</li><li>4. Test push messages (required)</li></ol>
Mail.XML Pull	<ol style="list-style-type: none"><li>1. Download and install the IV WSDL file</li><li>2. Download and install the IV SSL certificate</li><li>3. Register for the IV service through the BCG</li><li>4. Test pull messages (optional)</li></ol>

### 3.1 Install WSDL File

A WSDL definition is an XML-based document that automates the details involved in communication between applications. The first step in using Mail.XML push and pull messages is to download and install the IV WSDL file. The IV WSDL file will be available for download from the IV RIBBS page.

### 3.2 Install SSL Certificate

An SSL certificate provides communication security between a Web browser and a Web server. Whether you need to install an SSL certificate on your own servers or download and install the IV SSL certificate depends on whether you want to use push or pull messages. Please see the appropriate section below.

#### 3.2.1 Push

To use Mail.XML push messages, you must purchase and install a signed SSL certificate on the servers that will receive data from Postal Service servers. The Postal Service currently supports certificates obtained from Verisign or Comodo only.

#### 3.2.2 Pull

To use Mail.XML pull messages, you must download and install the IV SSL certificate. The IV SSL certificate is available to download from the [IV RIBBS page](#). See the **IV Reference Materials** section of the page.

### 3.3 Register for IV Service through BCG

See the *IV Mail Tracking & Reporting User Guide* for instructions to register for the IV service through the BCG. The User Guide will be available at a later time.

### 3.4 Test Messages

The final step is for the mailer to test the push or pull messages. Testing is required before using push messages. Testing is optional for using pull messages but is strongly recommended.

#### 3.4.1 Push Messages

Testing is required before using push messages.

To test push messages, a mailer should follow these steps:

1. Add the mailer's Web service endpoint as a destination in the IV address book.  
**Note:** Instructions for doing this will be included in the User Guide. The User Guide will be available at a later time.
2. Click **Test Communication**. IV sends a test push message to the mailer's Web service and determines if the communication was successful or not. If the test was successful, that endpoint is marked as "validated" in IV and can then be used for a push subscription.

**Note:** Any time a mailer adds or changes a Web service endpoint, the mailer must repeat the test process above for push messages.

#### 3.4.2 Pull Messages

Testing is optional for using pull messages but is strongly recommended.

To test pull messages, a mailer should follow these steps:

1. Download the test pull messages .ZIP file (location to be provided at a later time).
2. Follow the instructions in the .ZIP file to test pull messages. The test process includes pointing the mailer Web service to an IV test environment URL, sending a test pull message to IV, and receiving a response from IV.
3. Once the test is successful, the mailer can point the Web service to the IV production environment URL.

## 4 Customer Support

The IV Customer Support group through the Postal Service National Customer Support Center (NCSC):

- Provides full support for initial onboarding
- Provides full support for all IV mail tracking needs
  - Questions
  - Account administration
  - Research visibility issues
  - Barcode testing and certification
- Is able to address most issues on initial call
- Will escalate to necessary functional organizations to address any systemic issues
- Escalates issues to management

<b>Telephone</b>	1-800-238-3150, Option #2
<b>Email</b>	<a href="mailto:InformedVisibility@usps.gov">InformedVisibility@usps.gov</a>
<b>Mail</b>	USPS National Customer Support Center ATTN: Informed Visibility 225 N. Humphreys Blvd, Suite 501 Memphis, TN 38188-1001

General information about IV is available at [https://ribbs.usps.gov/index.cfm?page=informed\\_visibility](https://ribbs.usps.gov/index.cfm?page=informed_visibility).

## Appendix A Change History

Date	Version	Description
6/9/2016	0.17	Draft for MTAC UG4 review
6/27/2016	1.0	First published version. Removed <i>MPSVis</i> Mail.XML messages pending determination of method to deliver additional bundle visibility.
6/29/2016	1.1	Updated Section 2.1.3.1: <i>Legacy IMb Tracing</i> to specify that Suppressed Routing Code is included. (Section later moved to User Guide.)
9/8/2016	2.0	<p>Changed title from “Technical Guide” to “Mail.XML Guide”. Moved following sections to <i>IV Mail Tracking &amp; Reporting User Guide</i>:</p> <ul style="list-style-type: none"> <li>• Data Provisioning Options</li> <li>• Data Dictionary</li> <li>• Definitions</li> <li>• Business Rules</li> <li>• Legacy <i>PostalOne!</i> Informed Visibility Download File Format</li> </ul> <p>Revised Section 3: <i>Getting Started with Mail.XML</i>, which included addition of link to IV SSL certificate. Removed FAQs.</p>

## Appendix B Acronyms and Abbreviations

Acronym or Abbreviation	Description
BCG	Business Customer Gateway
CRID	Customer Registration ID
CSA	customer supplier agreement
FS	Full-Service
IMb	Intelligent Mail barcode
IMpb	Intelligent Mail package barcode
IMcb	Intelligent Mail container barcode
IMtb	Intelligent Mail tray barcode
IV	Informed Visibility
MID	Mailer ID
MTAC UG4	Mailers' Technical Advisory Committee User Group 4
NCSC	National Customer Support Center
NFS	non Full-Service
SSL	Secure Sockets Layer
USPS	United States Postal Service
XML	eXtensible Markup Language
XSD	XML Schema Definition
WSDL	Web Services Description Language

## Appendix C      References

### **Business Customer Gateway (BCG)**

<https://gateway.usps.com>

### **eDoc and Full-Service on RIBBS**

<https://ribbs.usps.gov/index.cfm?page=electronicdoc>

### **Guide to Full-Service**

[https://ribbs.usps.gov/intelligentmail\\_guides/documents/tech\\_guides/GuidetoIntelligentMailLettersandFlats.pdf](https://ribbs.usps.gov/intelligentmail_guides/documents/tech_guides/GuidetoIntelligentMailLettersandFlats.pdf)

### **IDEAlliance Mail.XML Specifications**

<http://idealliance.org/specifications/mailxml>

### **Informed Visibility (IV) on RIBBS**

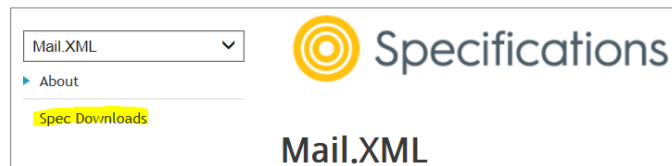
[https://ribbs.usps.gov/index.cfm?page=informed\\_visibility](https://ribbs.usps.gov/index.cfm?page=informed_visibility)



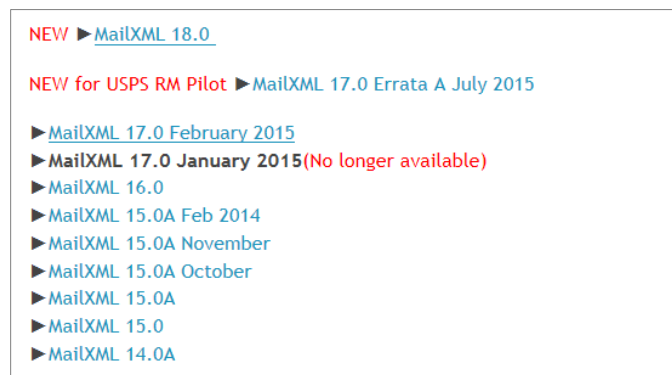
## Appendix D Mail.XML Schemas and Specifications

IDEAlliance publishes the Mail.XML schema definitions and specifications. To download the schema definitions and specifications, follow these instructions:

1. Go to the IDEAlliance site: <http://www.idealliance.org>.
2. Click the **Specifications** tab > **Mail.XML**.
3. In the left-hand navigation, click **Spec Downloads**.



4. To download the specification, click the title of the specification for the desired Mail.XML version.



The specification ZIP file contains two folders: **Doc** and **XSDs**. The Doc folder contains a PDF specification document for each of the eight Mail.XML modules. This document describes and provides visual representations of the elements, attributes, complex types, and simple types used in the particular module. The XSDs folder contains the XML Schema Definitions.

## Appendix E Extract of Mail.XML Element, Complex Type, and Attribute Definitions

The element, complex type, and attribute definitions contained in this appendix were extracted from the IDEAlliance® Mail.XML Version 16.0 Specifications and XSDs. See Appendix D: *Mail.XML Schemas and Specifications* for instructions to obtain these documents.

### E.1 Complex Type: basicReturnInfoType

Field	Format	Acceptable Values	Business Rules	Comments
basicReturnInfoType BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	Optional 0 to many allowed	-
ReturnCode	ns04	-	Optional	Refer to Mail.XML Base schema
ReturnDescription	s260	-	Required	Refer to Mail.XML Base schema
errorWarning	errorWarningType	-	Optional	Refer to Mail.XML Defs schema
ContainerErrorWarningBlock	containerErrorWarningBlockType	-	Optional	Refer to Mail.XML Defs schema
Sequence Block ENDS	-	-	-	-
basicReturnInfoType ENDS	-	-	-	-

### E.2 Complex Type: clockStartedType

Field	Format	Acceptable Value	Business Rules	Comments
clockStarted Type BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
StartTheClockBEMUBlock	StartTheClockBEMU	-	-	See Mail.XML DD schema
StartTheClockDropShipOrOrigin Block	StartTheClockDropShipOrOrigin	-	-	See Mail.XML DD schema
StartTheClockPlantLoadBlock	StartTheClockPlantLoad	-	-	See Mail.XML DD schema
Sequence Block ENDS	-	-	-	-
clockStarted Type ENDS	-	-	-	-

### E.3 Element: ContainerVisibilityEntry

Field	Format	Acceptable Values	Business Rules	Comments
ContainerVisibilityEntry BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
Choice Block BEGINS	-	-	Optional	-
Sequence Block BEGINS	-	-	-	-
UserLicenseCode	<a href="#">userLicenseCodeType</a>	-	-	Refer to this simple type in Appendix F
MaildatJobID	<a href="#">jobIDType</a>	-	Required when Mail.dat is used	Refer to this simple type in Appendix F
Sequence Block ENDS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
CustomerGroupID	<a href="#">s25</a>	-	Optional	Refer to this simple type in Appendix F
MailingGroupID	nonNegativeInteger	-	Required	-
Sequence Block ENDS	-	-	-	-
Choice Block ENDS	-	-	-	-
ConsigneeApptID	<a href="#">s12</a>	-	Optional	Refer to this simple type in Appendix F
LogicalIndicator	<a href="#">yesNo</a>	-	Optional	Refer to this simple type in Appendix F
CSAID	<a href="#">s10</a>	-	Optional	Refer to this simple type in Appendix F
ContainerID	s06	-	Optional	Refer to Mail.XML Base schema
ParentContainerID	s06	-	Optional	Refer to Mail.XML Base schema
SiblingContainerID	s06	-	Optional	Refer to Mail.XML Base schema
ContainerType	mailXMLContainerType	-	Optional	Refer to Mail.XML Base schema
ScanEvent	scanEventType	-	Optional	Refer to Mail.XML DD schema
Choice Block BEGINS	-	-	-	-

Field	Format	Acceptable Values	Business Rules	Comments
IMcb	<a href="#">IMcbType</a>	-	Optional	Refer to this simple type in Appendix F
IMtb	<a href="#">IMtbType</a>	-	Optional	Refer to this simple type in Appendix F
IMpb	<a href="#">IMpbType</a>	-	Optional	Refer to this simple type in Appendix F
Choice Block ENDS	-	-	-	-
FullServiceComplianceIndicator	fullServiceComplianceIndicatorType	-	Optional	Refer to Mail.XML DD schema
FullServiceNonComplianceReasonCode	reasonCodeType	-	Optional	Refer to Mail.XML DD schema
FSNonFSAAvailabilityDate	date	-	Optional	-
FullServiceIndicator	<a href="#">yesNo</a>	-	Optional	Refer to this simple type in Appendix F
Sequence Block ENDS	-	-	-	-
ContainerVisibilityEntry ENDS	-	-	-	-

#### E.4 Element: DataRecipient

Field	Format	Acceptable Values	Business Rules	Comments
DataRecipient BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
CRID	CRIDType	-	Required	Refer to Mail.XML Base schema
Role	roleType	-	Required	Refer to Mail.XML Base schema
Sequence Block ENDS	-	-	-	-
DataRecipient ENDS	-	-	-	-

#### E.5 Element: IMbMailpieceScanData

Field	Format	Acceptable Values	Business Rules	Comments
IMbMailpieceScanData BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	Optional	-

Field	Format	Acceptable Values	Business Rules	Comments
UserLicenseCode	<a href="#">userLicenseCodeType</a>	-	-	Refer to this simple type in Appendix F
MaildatJobID	<a href="#">jobIDType</a>	-	-	Refer to this simple type in Appendix F
CustomerGroupID	<a href="#">s25</a>	-	-	Refer to this simple type in Appendix F
MailingGroupID	nonNegativeInteger	-	Optional	-
Choice Block BEGINS	-	-	-	-
MailBundleCount	nonNegativeInteger	-	-	-
MPSCCount	nonNegativeInteger	-	-	-
Choice Block ENDS	-	-	-	-
Choice Block BEGINS	-	-	-	-
IMcbAndIMtbPieceScanInfo	-	-	-	-
IMcbPieceScanInfo	-	-	-	-
IMtbPieceScanInfo	-	-	-	-
IMbScanRec	s500	-	Unbounded	Refer to Mail.XML DD schema
Choice Block ENDS	-	-	-	-
Sequence Block ENDS	-	-	-	-
IMbMailpieceScanData ENDS	-	-	-	-

## E.6 Attribute Group: LargeTransactionDividerGroupType

Field	Format	Acceptable Values	Business Rules	Comments
LargeTransactionDividerGroupType BEGINS	-	-	-	-
MessageGroupID	<a href="#">s20</a>	-	Required	Refer to this simple type in Appendix F
TotalMessageCount	positiveInteger	-	Required	-
MessageSerialNumber	positiveInteger	-	Required	-
TransmittedRecordCount	positiveInteger	-	Required	-
TotalRecordsAcrossMessages	positiveInteger	-	Required	-
LastMessage	<a href="#">yesNo</a>	-	Optional Default set to "No"	Refer to this simple type in Appendix F
LargeTransactionDividerGroupType ENDS	-	-	-	-

## E.7 Attribute Group: LargeTransactionDividerGroupOptionalType

Field	Format	Acceptable Values	Business Rules	Comments
LargeTransactionDividerGroupOptionalType BEGINS	-	-	-	-
MessageGroupID	<a href="#">s20</a>	-	Optional	Refer to this simple type in Appendix F
TotalMessageCount	positiveInteger	-	Optional	-
MessageSerialNumber	positiveInteger	-	Optional	-
TransmittedRecordCount	positiveInteger	-	Optional	-
TotalRecordsAcrossMessage	positiveInteger	-	Optional	-
LastMessage	<a href="#">yesNo</a>	-	Optional Default set to "No"	Refer to this simple type in Appendix F
LargeTransactionDividerGroupOptionalType ENDS	-	-	-	-

## E.8 Element: LargeTransactionDividerResult

Field	Format	Acceptable Values	Business Rules	Comments
LargeTransactionDividerResult BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
LargeTransactionDivider	LargeTransactionDivider	-	-	Refer to Mail.XML Defs schema
Sequence Block ENDS	-	-	-	-
LargeTransactionDividerResult ENDS	-	-	-	-

## E.9 Complex Type: manifestScanEventDetailType

Field	Format	Acceptable Values	Business Rules	Comments
manifestScanEventDetailType BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
USPSEventExtractFileVersionNumber	s03	-	-	Refer to Mail.XML Base schema
IMpb	<a href="#">IMpbType</a>	-	-	Refer to this simple type in Appendix F

Field	Format	Acceptable Values	Business Rules	Comments
ElectronicFileNumber	s34	-	-	Refer to Mail.XML Base schema
MailerID	MIDType	-	-	Refer to Mail.XML Defs schema
MailerName	<a href="#">s20</a>	-	-	Refer to this simple type in Appendix F
DestinationZipCode	zipCode	-	-	-
DestinationZipPlusFour	s09	-	-	Refer to Mail.XML Base schema
ScanningFacilityZip	zipCode	-	-	-
ScanningFacilityName	s31	-	-	Refer to Mail.XML Base schema
EventCode	s02	-	-	Refer to Mail.XML Base schema
EventName	s40	-	-	Refer to Mail.XML Base schema
EventDate	date	-	-	-
EventTime	time	-	-	-
MailerOwnerID	MIDType	-	-	Refer to Mail.XML Defs schema
CustomerReferenceID	s40	-	-	Refer to Mail.XML Base schema
DestinationCountryCode	s02	-	-	Refer to Mail.XML Base schema
RecipientName	<a href="#">s20</a>	-	-	Refer to this simple type in Appendix F
OriginalLabel	s34	-	-	Refer to Mail.XML Base schema
UnitofMeasureCode	ns01	-	-	Refer to Mail.XML Base schema
Weight	ns09	-	-	Refer to Mail.XML Base schema
GuaranteedDeliveryDate	time	-	-	-

Field	Format	Acceptable Values	Business Rules	Comments
GuaranteedDeliveryTime	time	-	-	-
LogisticsManagerMailerID	MIDType	-	-	Refer to Mail.XML Defs schema
Sequence Block ENDS	-	-	-	-
manifestScanEventDetailType ENDS	-	-	-	-

### E.10 Complex Type: manifestScanQueryType

Field	Format	Acceptable Values	Business Rules	Comments
manifestScanQueryType BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
ConsigneeManifestID	<a href="#">ns22</a>	-	-	Refer to this simple type in Appendix F
Sequence Block ENDS	-	-	-	-
manifestScanQueryType ENDS	-	-	-	-

### E.11 Complex Type: manifestScanNotificationDataType

Field	Format	Acceptable Values	Business Rules	Comments
manifestScanNotificationDataType BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
ConsigneeManifestID	<a href="#">ns22</a>	-	-	Refer to this simple type in Appendix F
Sequence Block ENDS	-	-	-	-
manifestScanNotificationDataType ENDS	-	-	-	-

### E.12 Complex Type: messageResponseNotAvailableResponseType

Field	Format	Acceptable Values	Business Rules	Comments
messageResponseNotAvailableResponseType BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
ReturnInfo	returnInfoType	-	-	See Mail.XML Defs schema
Sequence Block ENDS	-	-	-	-



Field	Format	Acceptable Values	Business Rules	Comments
TrackingID	<a href="#">s20</a>	-	Required	Refer to this simple type in Appendix F
messageResponseNotAvailableResponseType ENDS	-	-	-	-

### E.13 Complex Type: messageResponseRetrievalRequestType

Field	Format	Acceptable Values	Business Rules	Comments
messageResponseRetrievalRequestType BEGINS	-	-	-	-
TrackingID	<a href="#">s20</a>	-	Required	Refer to this simple type in Appendix F
messageResponseRetrievalRequestType ENDS	-	-	-	-

### E.14 ComplexType: messageResponseRetrievalResponseType

Field	Format	Acceptable Values	Business Rules	Comments
messageResponseRetrievalResponseType BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
Choice Block BEGINS	-	-	-	-
QueryResults Block BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
Choice Block BEGINS	-	-	-	-
ContainerVisibilityQueryResponse	<a href="#">ContainerVisibilityQueryResponse</a>	-	-	Refer to this message in Section 2.2.2
StartTheClockQueryResponse	<a href="#">StartTheClockQueryResponse</a>	-	-	Refer to this message in Section 2.2.4
Choice Block ENDS	-	-	-	-
ReturnInfo	<a href="#">basicReturnInfoType</a>	-	-	Refer to this complex type in Appendix D
Sequence Block ENDS	-	-	-	-
QueryError Block BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
ReturnInfo	<a href="#">basicReturnInfoType</a>	-	-	Refer to this complex type in Appendix D

Field	Format	Acceptable Values	Business Rules	Comments
Sequence Block ENDS	-	-	-	-
QueryError Block ENDS	-	-	-	-
DeliveryResponse	DeliveryResponse	-	-	Refer to Mail.XML schema
NotificationResponse	NotificationResponse	-	-	Refer to Mail.XML schema
SystemVersionQueryResponse	SystemVersionQueryResponse	-	-	Refer to Mail.XML schema
Choice Block ENDS	-	-	-	-
Sequence Block ENDS	-	-	-	-
TrackingID	<a href="#">s20</a>	-	Required	Refer to this simple type in Appendix F
messageResponseRetrievalResponseSetType ENDS	-	-	-	-

### E.15 ComplexType: MPSNotificationDataType

Field	Format	Acceptable Values	Business Rules	Comments
MPSNotificationDataType BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
MPSRBlock	MPSRBlockType	-	-	See Mail.XML DD schema
MPSAvailabilityDate	date	-	-	-
Sequence Block ENDS	-	-	-	-
MPSNotificationDataType ENDS	-	-	-	-

### E.16 Complex Type: participantIDType

Field	Format	Acceptable Values	Business Rules	Comments
participantIDType BEGINS	-	-	-	-
MailerID6	mailerID6Type	-	Not required (attribute) Either MailerID6 or MailerID9 can be provided, not both	Refer to Mail.XML Base schema

Field	Format	Acceptable Values	Business Rules	Comments
MailerID9	mailerID9Type	-	Not required (attribute) Either MailerID6 or MailerID9 can be provided, not both	Refer to Mail.XML Base schema
CRID	CRIDType	-	Not required (attribute) Either CRID or MID can be provided for authorization	Refer to Mail.XML Base schema
SchedulerID	<a href="#">s12</a>	-	Optional	Refer to this simple type in Appendix F
MaildatUserLicense	<a href="#">userLicenseCodeType</a>	-	Optional	Refer to this simple type in Appendix F
ShippingAgentID	<a href="#">s12</a>	-	Optional	Refer to this simple type in Appendix F
ReceivingAgentID	<a href="#">s12</a>	-	Optional	Refer to this simple type in Appendix F
participantIDType ENDS	-	-	-	-

### E.17 Complex Type: permitPublicationDataType

Field	Format	Acceptable Values	Business Rules	Comments
permitPublicationDataType BEGINS	-	-	-	-
Choice Block BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
PermitNumber	s08	-	-	Refer to Mail.XML Base schema
PaymentAccountNumber	<a href="#">s20</a>	-	-	Refer to this simple type in Appendix F
PermitType	permitTypeType	-	-	Refer to Mail.XML Base schema
PermitZip4	ns09	-	-	Refer to Mail.XML Base schema
Sequence Block ENDS	-	-	-	-

Field	Format	Acceptable Values	Business Rules	Comments
Sequence Block BEGINS	-	-	-	-
PublicationNumber	s08	-	-	Refer to Mail.XML Base schema
PaymentAccountNumber	<a href="#">s20</a>	-	-	Refer to this simple type in Appendix F
Sequence Block ENDS	-	-	-	-
Choice Block ENDS	-	-	-	-
permitPublicationDataType ENDS	-	-	-	-

### E.18 Element: QueryError

Field	Format	Acceptable Values	Business Rules	Comments
QueryError BEGINS	-	-	-	-
Sequence Block BEGINS	-	-	-	-
ReturnInfo	<a href="#">basicReturnInfoType</a>	-	-	Refer to this complex type in Appendix D
Sequence Block ENDS	-	-	-	-
QueryError ENDS	-	-	-	-

### E.19 Complex Type: submittingSoftwareType

Field	Format	Acceptable Values	Business Rules	Comments
submittingSoftwareType BEGINS	-	-	-	-
SoftwareName	string	-	Required	-
Vendor	string	-	Required	-
Version	string	-	Required	-
ApprovalDate	date	YYYY-MM-DD	Optional	-
ApprovalKey	string	-	Optional	-
submittingSoftwareType ENDS	-	-	-	-

## Appendix F Extract of Mail.XML Simple Type Definitions

The simple type definitions contained in this appendix were extracted from the IDEAlliance Mail.XML Version 16.0 Specifications and XSDs. See Appendix D: *Mail.XML Schemas and Specifications* for instructions to obtain these documents.

### F.1 Simple Type: containerScanStateType

Tag	Value
Base	string
enumeration	Electronic Information Received
enumeration	Entered at USPS
enumeration	Enroute Depart
enumeration	Enroute
enumeration	Enroute Arrive
enumeration	All Scan States

### F.2 Simple Type: countTypeType

Tag	Value
Base	string
enumeration	IMcb
enumeration	IMtb
enumeration	IMpb

### F.3 Simple Type: eDocTypeType

Tag	Value
Base	string
enumeration	101
enumeration	102
enumeration	103
enumeration	104
enumeration	105
enumeration	106
enumeration	107
enumeration	108
enumeration	109
enumeration	110

#### F.4 Simple Type: IMcbType

Tag	Value
Base	string
maxLength	24
minLength	21

#### F.5 Simple Type: IMpbType

Tag	Value
Base	string
maxLength	34
minLength	21

#### F.6 Simple Type: IMtbType

Tag	Value
Base	string
maxLength	24
minLength	24

#### F.7 Simple Type: jobIDType

Tag	Value
Base	string
maxLength	8
minLength	1
whiteSpace	preserve

#### F.8 Simple Type: localeKeyType

Tag	Value
Base	s09*

*\*Refer to Mail.XML Base schema*

#### F.9 Simple Type: ns22

Tag	Value
Base	string
value	[0-9]{22}

#### F.10 Simple Type: retrieveDataByType

Tag	Value
Base	string

Tag	Value
enumeration	FS
enumeration	NFS
enumeration	Both

### F.11 Simple Type: s10

Tag	Value
Base	string
maxLength	10
minLength	1
whiteSpace	preserve

### F.12 Simple Type: s12

Tag	Value
Base	string
maxLength	12
minLength	1
whiteSpace	preserve

### F.13 Simple Type: s20

Tag	Value
Base	string
maxLength	20
minLength	1
whiteSpace	preserve

### F.14 Simple Type: s22

Tag	Value
Base	string
maxLength	22
minLength	1
whiteSpace	preserve

### F.15 Simple Type: s25

Tag	Value
Base	string
maxLength	25
minLength	1

Tag	Value
whiteSpace	preserve

### F.16 Simple Type: userLicenseCodeType

Tag	Value
Base	string
maxLength	4
minLength	1
whiteSpace	preserve

### F.17 Simple Type: yesNo

Tag	Value
Base	string
enumeration	Yes
enumeration	No