C.H. Robinson Worldwide

MESSAGE IMPLEMENTATION GUIDE

TECHNICAL SPECIFICATION
FOR XML STATUS UPDATE MESSAGE
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1. Introduction

This document is intended for business and technical personnel engaged in establishing an electronic connection with C.H. Robinson for the purpose of transmitting a XML EDI **Status Update message** to a received Load Booking. Separate Implementation Guides have been created for the Booking and Response EDI messages.

The documents describes the XML schema’s from which **three** types of standard messages can be created and communicated between C.H. Robinson and a Carrier

1. **Outbound Message (C.H. Robinson to Carrier):**
   - **Load Booking (Call-Off)** – C.H. Robinson sends a load booking to a carrier. This booking will include all information as to the pick-up and delivery of the load, required dates, rates, and item details.

2. **Inbound Message (Carrier to C.H. Robinson):**
   - **Response to Load Booking** – The carrier sends C.H. Robinson a response to the received load booking (accept or decline).
   - **Shipment Status Updates** – The carrier sends C.H. Robinson updates to provide up-to-date status and reference information on in-transit shipments.

These messages can be visualized in the below diagram. The diagram below outlines a typical EDI transmission scenario between C.H. Robinson and a carrier.

1. C.H. Robinson will send a Load booking to a carrier
2. A carrier will either accept or reject the booking
3. After acceptance a carrier will send driver and vehicle details (e.g. license plate information)
4. During transit up to the final delivery a carrier will send multiple status updates related to the location and status of the shipment.
2. XML Structure

- The message specification is broken down into sections for ease of explanation. In practice the entire message will be transmitted as one.
- In the below diagrams anything with a min of zero is considered optional, and anything with a min of one or more is considered mandatory.
- Min (Use) and Max (Use) refers to the minimum and maximum occurrence of the field it describes.
- Min Children and Max Children refers to the minimum and maximum sub-elements linked to the field it describes.
- Required describes if the element is mandatory (M), Optional (O) or Conditional (C).
- Length refers to the maximum length of the field it describes.
- Type describes what kind of data a certain element holds (Alpha Numeric (AN) or Numeric (N) and its subtype (String, Integer, Decimal or Boolean).
3. Status Update Message

The response and status update messages share the same basic XML schema. The type of message determines which elements are mandatory or optional. Any differences in application of these elements will be highlighted.

3.1 Shipment

The **Shipment** Element is the root element for the XML message.

<table>
<thead>
<tr>
<th>Element</th>
<th>Header</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properties</td>
<td>Min Use</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Diagram:

```
  +----------------+        +---------------+        +----------------+        +----------------+        +----------------+
  |  Header        |        |  ShipmentDetails |        |  Stops         |        |  Carriers      |
  +----------------+        +---------------+        +----------------+        +----------------+        +----------------+
  | L:1             |        | L:1            |        | L:1            |        | L:1            |
```


3.2 Header

The **Header** part of the message indicates the type of message and the date and time of creation. There are three message action types. Only one of the three types should be set to “1”, if shown then the others should show “0”.

<table>
<thead>
<tr>
<th>Element</th>
<th>Header</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properties</td>
<td></td>
</tr>
<tr>
<td>Min Use</td>
<td>1</td>
</tr>
<tr>
<td>Max Use</td>
<td>1</td>
</tr>
<tr>
<td>Min Children</td>
<td>1</td>
</tr>
<tr>
<td>Max Children</td>
<td>5</td>
</tr>
<tr>
<td>Required</td>
<td>M</td>
</tr>
</tbody>
</table>

**Diagram**

```
<Header>
  <CreationDateTime>20170424070521</CreationDateTime>
  <ShipmentAccepted>0</ShipmentAccepted>
  <ShipmentDecline>0</ShipmentDecline>
  <ShipmentStatus>1</ShipmentStatus>
</Header>
```

<table>
<thead>
<tr>
<th>Sub Element</th>
<th>Min</th>
<th>Max</th>
<th>Required</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>CreationDateTime</td>
<td>1</td>
<td>1</td>
<td>M</td>
<td>AN (String)</td>
<td>14</td>
<td>Document Creation Date &amp; Time (Format: YYYYMMDDHHMMSS)</td>
<td>20170424070521</td>
</tr>
<tr>
<td>ShipmentAccepted</td>
<td>1</td>
<td>1</td>
<td>C</td>
<td>N (String)</td>
<td>1</td>
<td>If Value is &quot;1&quot; Flag indicates Shipment Accepted. If value is 0 then data element is not mandatory (Valid values: 1 or 0)</td>
<td>0</td>
</tr>
<tr>
<td>ShipmentDecline</td>
<td>1</td>
<td>1</td>
<td>C</td>
<td>N (String)</td>
<td>1</td>
<td>If Value is &quot;1&quot; Flag indicates Shipment Declined. If value is 0 then data element is not mandatory (Valid values: 1 or 0)</td>
<td>0</td>
</tr>
<tr>
<td>ShipmentStatus</td>
<td>1</td>
<td>1</td>
<td>C</td>
<td>N (String)</td>
<td>1</td>
<td>If Value is &quot;1&quot; Flag indicates Shipment Status Update. If value is 0 then data element is not mandatory (Valid values: 1 or 0)</td>
<td>1</td>
</tr>
<tr>
<td>ShipmentDeclineReason</td>
<td>0</td>
<td>1</td>
<td>O</td>
<td>AN (String)</td>
<td>10</td>
<td>Reason codes when ShipmentDecline is “1”</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Notes**
3.3 Shipment Details

The **Shipment Details** Element of the message contains basic information about the shipment.

### Element: ShipmentDetails

<table>
<thead>
<tr>
<th>Properties</th>
<th>Min Use</th>
<th>Max Use</th>
<th>Min Children</th>
<th>Max Children</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>M</td>
</tr>
</tbody>
</table>

### Element: ShipmentReferences

<table>
<thead>
<tr>
<th>Properties</th>
<th>Min Use</th>
<th>Max Use</th>
<th>Min Children</th>
<th>Max Children</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>∞</td>
<td>O</td>
</tr>
</tbody>
</table>

### Element: ShipmentReference

<table>
<thead>
<tr>
<th>Properties</th>
<th>Min Use</th>
<th>Max Use</th>
<th>Min Children</th>
<th>Max Children</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>∞</td>
<td>2</td>
<td>2</td>
<td>O</td>
</tr>
</tbody>
</table>

**The ShipmentID MUST be sent, and must match the ShipmentID that was sent in the Tender to ensure we can match the update to the correct load**
3.4  Stops

The **Stops** segment is present only in status update messages, it is not required in response (accept or reject) messages.

<table>
<thead>
<tr>
<th>Element</th>
<th>Stops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properties</td>
<td>Min Use</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properties</td>
<td>Min Use</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Diagram:

```
   StopSeqNum (1.1)
   LocationID (1.1)
   EventStatus (1.1)
   EventReason (1.1)
   ReasonDesc (0.1)
   EventDateTime (1.1)
   Latitude (0.1)
   Longitude (0.1)
   City (1.1)
   StateProvince (0.1)
   Country (1.1)
   ZipCode (0.1)
   Temp (0.1)
   TempType (0.1)
   POD (0.1)
```

```
   Stops (1.1)
   Stop (1.1)
```
Sample

```xml
<Stops>
  <Stop>
    <StopSeqNum>0</StopSeqNum>
    <LocationID>W14156948</LocationID>
    <EventStatus>AP</EventStatus>
    <EventReason>NS</EventReason>
    <ReasonDesc>bad weather</ReasonDesc>
    <EventDateTime>20170421120000</EventDateTime>
    <Latitude>32.30642</Latitude>
    <Longitude>-122.61458</Longitude>
    <City>Edina</City>
    <StateProvince>MN</StateProvince>
    <Country>US</Country>
    <ZipCode>55345</ZipCode>
    <Temp>0</Temp>
    <TempType>C</TempType>
    <POD>John Smith</POD>
  </Stop>
</Stops>
```

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Max</th>
<th>Required</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>StopSeqNum</td>
<td>1</td>
<td>1</td>
<td>M</td>
<td>N (Integer)</td>
<td>2</td>
<td>Stop unique ID (this is the stop number send on the OB Booking XML)</td>
<td>0</td>
</tr>
<tr>
<td>LocationID</td>
<td>1</td>
<td>1</td>
<td>M</td>
<td>AN (String)</td>
<td>50</td>
<td>CHR Location ID</td>
<td>W90222948</td>
</tr>
<tr>
<td>EventStatus</td>
<td>1</td>
<td>1</td>
<td>M</td>
<td>AN (String)</td>
<td>2</td>
<td>Event Status Codes</td>
<td>AP</td>
</tr>
<tr>
<td>EventReason</td>
<td>1</td>
<td>1</td>
<td>C</td>
<td>AN (String)</td>
<td>2</td>
<td>Event Reason Codes. Used to expand on Event Status if needed. (NS = nothing to report)</td>
<td>NS</td>
</tr>
<tr>
<td>ReasonDesc</td>
<td>0</td>
<td>1</td>
<td>O</td>
<td>AN (String)</td>
<td>256</td>
<td>Allow carrier to add extra information relevant to the stop</td>
<td>Bad weather</td>
</tr>
<tr>
<td>EventDateTime</td>
<td>1</td>
<td>1</td>
<td>C</td>
<td>AN (String)</td>
<td>14</td>
<td>Date Time of Event (Format: YYYYMMDDHHMMSS)</td>
<td>20170421120000</td>
</tr>
<tr>
<td>Latitude</td>
<td>0</td>
<td>1</td>
<td>C</td>
<td>N (Decimal)</td>
<td>30</td>
<td>Latitude sent in decimal format. Include if known.</td>
<td>32.30642</td>
</tr>
<tr>
<td>Longitude</td>
<td>0</td>
<td>1</td>
<td>C</td>
<td>N (Decimal)</td>
<td>30</td>
<td>Longitude sent in decimal format. Include if known.</td>
<td>-122.61458</td>
</tr>
<tr>
<td>City</td>
<td>1</td>
<td>1</td>
<td>M</td>
<td>AN (String)</td>
<td>60</td>
<td>Location City</td>
<td>Edina</td>
</tr>
<tr>
<td>StateProvince</td>
<td>0</td>
<td>1</td>
<td>C</td>
<td>AN (String)</td>
<td>60</td>
<td>State or Province Code the City is located (if applicable)</td>
<td>MN</td>
</tr>
<tr>
<td>Country</td>
<td>1</td>
<td>1</td>
<td>M</td>
<td>AN (String)</td>
<td>2</td>
<td>Location Country</td>
<td>UK</td>
</tr>
<tr>
<td>ZipCode</td>
<td>0</td>
<td>1</td>
<td>C</td>
<td>AN (String)</td>
<td>10</td>
<td>Zip or Postal Code</td>
<td>SL3 0QR</td>
</tr>
<tr>
<td>Temp</td>
<td>0</td>
<td>1</td>
<td>C</td>
<td>N (String)</td>
<td>6</td>
<td>If temperature controlled load provide temperature reading</td>
<td>0</td>
</tr>
<tr>
<td>TempType</td>
<td>0</td>
<td>1</td>
<td>C</td>
<td>AN (String)</td>
<td>1</td>
<td>Standard that the temperature reading is in (F vs. C)</td>
<td>C</td>
</tr>
</tbody>
</table>
| POD          | 0   | 1   | C        | AN (String) | 256    | Name of person who signed the proof of delivery (would only be on delivery 214) | John Smith }
Notes

- EventStatus Codes are listed in spreadsheet in Appendix C
- EventReason Codes are listed in spreadsheet in Appendix C

**The StopSeqnum MUST be sent to ensure we can match the update to the correct load**
### 3.4 Carriers

This Element contains carrier specific information. Optionally the carrier can transmit Driver, Vehicle and shipment reference (PRO Number) information. If provided, the PRO Number will be printed on the self-bill (if applicable).

<table>
<thead>
<tr>
<th>Element</th>
<th>Carriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properties</td>
<td>Min Use</td>
</tr>
<tr>
<td>Carrier</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Sample

```
<Carriers>
  <Carrier>
    <ExpressCarrierCode>T9370971</ExpressCarrierCode>
    <TractorNumber>4AN1451</TractorNumber>
    <TrailerNumber>6P15205</TrailerNumber>
    <ProNumber>0378/704/0132/001</ProNumber>
    <ContainerNumber>HBSU12345678</ContainerNumber>
    <DriverName>Jane Smith</DriverName>
    <DriverPhoneNumber>5128675309</DriverPhoneNumber>
    <EmptyDateTime>20170424070521</EmptyDateTime>
    <EmptyLocation>Edina</EmptyLocation>
  </Carrier>
</Carriers>
```

#### Sub Element

<table>
<thead>
<tr>
<th>Sub Element</th>
<th>Min</th>
<th>Max</th>
<th>Required</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExpressCarrierCode</td>
<td>1</td>
<td>1</td>
<td>M</td>
<td>AN (String)</td>
<td>20</td>
<td>C.H. Robinson Carrier ID</td>
<td>T9014293</td>
</tr>
</tbody>
</table>
**The ExpressCarrierCode MUST be sent to ensure we can match the update to the correct load**

4. Useful Contacts

For questions send an email to CIT_Carrier_BA@chrobinson.com

There will be a separate and more specific contact when a project is created to implement the XML trading between partners and CH Robinson.
5. Appendices

Appendix A: Inbound XML EDI Schema

Appendix B: Example Messages

Outbound Messages
- 1A: Booking for a simple shipment (1 Pickup and 1 Delivery)
  
  1A_Booking_Request_Simple.xml

- 1B: Booking for a complex shipment (1 Pickup and 3 Deliveries)
  
  1B_Booking_Request_MultiStop.xml

Inbound Messages
- 2A: A Response (Accept) message to the above mentioned 1A
  
  2A_IB_Response_Accept.xml

- 2B: A Response (Decline) message to the above mentioned 1B
  
  2B_IB_Response_Decline.xml

- 3A: A Status Update (Vehicle Information) to the above mentioned 1A
  
  3A_IB_Status_Vehicle_Information.xml

- 3B: A Status Update (Arrived and Departed Pickup Location) to the above mentioned 1A
  
  3B_IB_Status_Arrived-at-Pickup.xml 3B_IB_Status_Departed-Pickup.xml

- 3C: A Status Update (Arrived and Departed Destination) to the above mentioned 1A
  
  3C_IB_Status_Arrived-at-Destination.xml 3C_IB_Status_Departed-Destination.xml

- 4A: A Status Update (Shipment Delayed) to the above mentioned 1A
  
  4A_IB_Status_Delayed.xml
Appendix C: Code Lists

- Event Status
  
  EventCodes.xlsx

- Event Reason
  
  ReasonCodes.xlsx