

# TUL XML Interface and Protocol Description

## Table of Contents

1	Description of the main XML message.....	1
1.1	Description of the different parameters in the envelope.....	1
1.1.1	SenderID.....	1
1.1.2	XMLReferenceNumber .....	1
1.1.3	ContainerID.....	1
1.1.4	ModeOfTransport.....	1
1.1.5	TransactionStatus.....	2
1.1.6	DocumentInfo.....	2
1.1.6.1	MRN .....	2
1.1.6.2	DocumentType .....	2
1.1.6.3	ValidityDate .....	2
1.1.6.4	AttachmentName.....	2
1.1.6.5	BinaryAttachmentData.....	2
1.2	Examples.....	3
2	Description of the reply XML message.....	6
2.1	Description of the different parameters in the envelope.....	6
2.1.1	ClientID.....	6
2.1.2	XMLReferenceNumber .....	6
2.1.3	Status.....	6
2.1.4	StatusCode .....	6
2.2	Examples.....	7
3	Available documentation .....	9

# 1 Description of the main XML message

The envelope for all the included data is named `<CustomsEnvelope>`. All the Container IDs that are mentioned in one envelope will be linked to all the documents in that same envelope. XML is case sensitive, so the tags should be used exactly as defined in this document. Also extra tabs or spaces between the tags can be inserted for better (human) reading. This should have no negative effect on the ability to read the file.

## 1.1 *Description of the different parameters in the envelope*

### 1.1.1 SenderID

The information in this tag holds the unique identification of the HNN customs desk customer sending the message. It will be represented by a number from the list of HNN customs desk customers. Each customer will use its number given by the HNN customs desk.

### 1.1.2 XMLReferenceNumber

The HNN customs desk customer's own reference number for this XML transaction.

We propose to make the XML reference number 12 digits long. The first three digits make up the senderID, padded with zeroes if appropriate. The remaining nine digits are a counter for the number of the transaction. Starting from '000000001', this would give 999 million unique numbers. Should all these numbers eventually have been used, the counter can be reset to 1. E.g. for AD Logistics NV, their first XML message would have as XMLReferenceNumber : 008000000001, the next one 008000000002, etc.

This scheme is only a proposal for the XML reference number. Any combination of up to 40 characters is valid. Please note that each customs desk customer must ensure its uniqueness.

### 1.1.3 ContainerID

Holds the container ID specified in the attached document(s). One message must contain at least 1 ContainerID tag. This also means that more than 1 container can be associated with the included document. A valid container ID must be entered. Note that all the Container IDs mentioned here must be unique and will be associated with all the documents mentioned in this same envelope.

The ContainerID always has to have exactly 11 characters, normally consisting of 4 prefix characters followed by 7 digits (if the control digit should be 10, make it a 0; no spaces are allowed between prefix and number). Missing letters or digits, e.g. for shipper's owned containers there is no prefix, should be substituted with '/' (e.g. //0619895).

### 1.1.4 ModeOfTransport

Can have four values :

- BG (barge)
- RL (rail)
- TR (truck)
- VS (vessel)

The parameter should be exactly two characters in length and contain only the assigned possibilities. Its use is mandatory.

### 1.1.5 TransactionStatus

Can have three values :

- Original
- Replace
- Cancel

- 'Original' signifies the first time you send information for that XMLReferenceNumber.

- When 'Replace' is selected, all the documents and container IDs that are currently associated with the given XMLReferenceNumber will be replaced by the ones given in the current envelope. This means that in a 'Replace' the complete actual situation has to be included.

- When 'Cancel' is selected, all the container IDs and documents associated with the given XMLReferenceNumber will be removed. It is not necessary to include the <DocumentInfo> element when cancelling a transaction.

### 1.1.6 DocumentInfo

An extra subdivision in the envelope that will hold all the information about the document that is included. This subdivision is made to allow more than 1 document to be included for a certain container(s). There is no limit to the number of DocumentInfo sections. This subdivision has the following parameters :

#### 1.1.6.1 MRN

This is the Customs Reference Number that is also printed on the included document.

#### 1.1.6.2 DocumentType

The document type can have three values :

- AccompanyingLetter (begeleidingsbrief)
- FollowingLetter (volgbrief)
- DocumentCopy (a copy of whatever extra document is necessary)

and is dependent on the kind of document that is effectively sent in the message.

Each kind of DocumentType can be used multiple times.

#### 1.1.6.3 ValidityDate

Optionally the validity date of the document can be sent. The format is in number format as YYYYMMDD (e.g. 20050721). When the element is present, a correct date between now and 6 months in the future must be provided.

#### 1.1.6.4 AttachmentName

Mandatory parameter, occurs only once in the DocumentInfo subdivision and holds the exact name of the document that is sent with the next parameter. Currently PDF, EMF and TIF files are supported. The correct extension must be included in the AttachmentName (only .pdf, .emf or .tif). If an incorrect or no extension is provided in the filename, the message will be rejected.

#### 1.1.6.5 BinaryAttachmentData

Binary file coded in Base64 format containing the file that needs to be put in the archive; mandatory and occurs only once in the DocumentInfo subdivision.

## 1.2 Examples

### Example 1 : 1 MRN, 1 ContainerID

```
<?xml version="1.0"?>
<!DOCTYPE CustomsEnvelope [
<!ELEMENT CustomsEnvelope (SenderID,XMLReferenceNumber,ContainerID+,
ModeOfTransport,TransactionStatus,DocumentInfo*)>
  <!ELEMENT DocumentInfo
(MRN,DocumentType,ValidityDate*,AttachmentName,BinaryAttachmentData)>
    <!ELEMENT SenderID      (#PCDATA)>
    <!ELEMENT XMLReferenceNumber  (#PCDATA)>
    <!ELEMENT ContainerID      (#PCDATA)>
    <!ELEMENT ModeOfTransport  (#PCDATA)>
    <!ELEMENT MRN              (#PCDATA)>
    <!ELEMENT DocumentType    (#PCDATA)>
    <!ELEMENT TransactionStatus (#PCDATA)>
    <!ELEMENT ValidityDate    (#PCDATA)>
    <!ELEMENT AttachmentName  (#PCDATA)>
    <!ELEMENT BinaryAttachmentData (#PCDATA)>
  ]><CustomsEnvelope>
<SenderID>86</SenderID>
<XMLReferenceNumber>086000000019</XMLReferenceNumber>
<ContainerID>MAEU8181406</ContainerID>
<ModeOfTransport>TR</ModeOfTransport>
<TransactionStatus>Original</TransactionStatus>
<DocumentInfo>
  <MRN>05BE10100024558048</MRN>
  <DocumentType>AccompanyingLetter</DocumentType>
  <ValidityDate>20050721</ValidityDate>
  <AttachmentName>05BE10100024558048-1-1.emf</AttachmentName>
  <BinaryAttachmentData>SUKqAMwPAGCB/4H/gf+B/4H/gf+B/4H/gf+B/4H/.
  ..</BinaryAttachmentData>
</DocumentInfo>
</CustomsEnvelope>
```

### Example 2 : Multiple ContainerIDs, 1 MRN

```
<?xml version="1.0"?>
<!DOCTYPE CustomsEnvelope [
<!ELEMENT CustomsEnvelope (SenderID,XMLReferenceNumber,ContainerID+,
ModeOfTransport,TransactionStatus,DocumentInfo*)>
  <!ELEMENT DocumentInfo
(MRN,DocumentType,ValidityDate*,AttachmentName,BinaryAttachmentData)>
    <!ELEMENT SenderID      (#PCDATA)>
    <!ELEMENT XMLReferenceNumber  (#PCDATA)>
    <!ELEMENT ContainerID      (#PCDATA)>
    <!ELEMENT ModeOfTransport  (#PCDATA)>
    <!ELEMENT MRN              (#PCDATA)>
    <!ELEMENT DocumentType    (#PCDATA)>
    <!ELEMENT TransactionStatus (#PCDATA)>
    <!ELEMENT ValidityDate    (#PCDATA)>
    <!ELEMENT AttachmentName  (#PCDATA)>
    <!ELEMENT BinaryAttachmentData (#PCDATA)>
  ]><CustomsEnvelope>
<SenderID>128</SenderID>
<XMLReferenceNumber>128000001025</XMLReferenceNumber>
<ContainerID>ICSU5023357</ContainerID>
<ContainerID>MSCU1069610</ContainerID>
```

```

<ContainerID>GLDU0307739</ContainerID>
<ContainerID>MSCU1355070</ContainerID>
<ContainerID>MSCU3954734</ContainerID>
<ModeOfTransport>TR</ModeOfTransport>
<TransactionStatus>Original</TransactionStatus>
<DocumentInfo>
  <MRN>05BE10100024664404</MRN>
  <DocumentType>FollowingLetter</DocumentType>
  <AttachmentName>0001_000000027139.TIF</AttachmentName>
  <BinaryAttachmentData>AADaAgAASP7//8QFAABd2P//GwAAABAAAADaAgAAJ
  vv//...</BinaryAttachmentData>
</DocumentInfo>
</CustomsEnvelope>

```

### Example 3 : 1 ContainerIDs, 2 MRN

```

<?xml version="1.0"?>
<!DOCTYPE CustomsEnvelope [
<!ELEMENT CustomsEnvelope (SenderID,XMLReferenceNumber,ContainerID+,
ModeOfTransport,TransactionStatus,DocumentInfo*)>
  <!ELEMENT DocumentInfo
(MRN,DocumentType,ValidityDate*,AttachmentName,BinaryAttachmentData)>
    <!ELEMENT SenderID (#PCDATA)>
    <!ELEMENT XMLReferenceNumber (#PCDATA)>
    <!ELEMENT ContainerID (#PCDATA)>
    <!ELEMENT ModeOfTransport (#PCDATA)>
    <!ELEMENT MRN (#PCDATA)>
    <!ELEMENT DocumentType (#PCDATA)>
    <!ELEMENT TransactionStatus (#PCDATA)>
    <!ELEMENT ValidityDate (#PCDATA)>
    <!ELEMENT AttachmentName (#PCDATA)>
    <!ELEMENT BinaryAttachmentData (#PCDATA)>
  ]><CustomsEnvelope>
<SenderID>97</SenderID>
<XMLReferenceNumber>097000000002</XMLReferenceNumber>
<ContainerID>MSCU8251020</ContainerID>
<ModeOfTransport>TR</ModeOfTransport>
<TransactionStatus>Original</TransactionStatus>
<DocumentInfo>
  <MRN>05BE10100024678542</MRN>
  <DocumentType>AccompanyingLetter</DocumentType>
  <AttachmentName>0001_0000758425.TIF</AttachmentName>
  <BinaryAttachmentData>
  AQAAAQAAAD2///6v///08SAADnGAAAAA...</BinaryAttachmentData>
</DocumentInfo>
<DocumentInfo>
  <MRN>05BE10100024678572</MRN>
  <DocumentType>FollowingLetter</DocumentType>
  <AttachmentName>0001_000000027139.TIF</AttachmentName>
  <BinaryAttachmentData>
  AQAAAQAAAD2///6v///08SAADnGAAAAA...</BinaryAttachmentData>
</DocumentInfo>
</CustomsEnvelope>

```

Example 4 : A 'Replace' of the message in Example 3 where the two documents (MRN 05BE10100024678542 and MRN 05BE10100024678572) are replaced with one (MRN 05BE10100024678542).

```

<?xml version="1.0"?>

```

```

<!DOCTYPE CustomsEnvelope [
<!ELEMENT CustomsEnvelope (SenderID,XMLReferenceNumber,ContainerID+,
ModeOfTransport,TransactionStatus,DocumentInfo*)>
  <!ELEMENT DocumentInfo
(MRN,DocumentType,ValidityDate*,AttachmentName,BinaryAttachmentData)>
    <!ELEMENT SenderID      (#PCDATA)>
    <!ELEMENT XMLReferenceNumber  (#PCDATA)>
    <!ELEMENT ContainerID      (#PCDATA)>
    <!ELEMENT ModeOfTransport  (#PCDATA)>
    <!ELEMENT MRN              (#PCDATA)>
    <!ELEMENT DocumentType    (#PCDATA)>
    <!ELEMENT TransactionStatus (#PCDATA)>
    <!ELEMENT ValidityDate    (#PCDATA)>
    <!ELEMENT AttachmentName   (#PCDATA)>
    <!ELEMENT BinaryAttachmentData (#PCDATA)>
  ]><CustomsEnvelope>
<SenderID>97</SenderID>
<XMLReferenceNumber>097000000002</XMLReferenceNumber>
<ContainerID>MSCU8251020</ContainerID>
<ModeOfTransport>TR</ModeOfTransport>
<TransactionStatus>Replace</TransactionStatus>
<DocumentInfo>
  <MRN>05BE10100024678542</MRN>
  <DocumentType>AccompanyingLetter</DocumentType>
  <AttachmentName>0001_0000758425.TIF</AttachmentName>
  <BinaryAttachmentData>
    AQAAAQAAAD2////6v///08SAADnGAAAAA...</BinaryAttachmentData>
</DocumentInfo>
</CustomsEnvelope>

```

### Example 5 : A 'Cancel' of the message in Example 3

```

<?xml version="1.0"?>
<!DOCTYPE CustomsEnvelope [
<!ELEMENT CustomsEnvelope (SenderID,XMLReferenceNumber,ContainerID+,
ModeOfTransport,TransactionStatus,DocumentInfo*)>
  <!ELEMENT DocumentInfo
(MRN,DocumentType,ValidityDate*,AttachmentName,BinaryAttachmentData)>
    <!ELEMENT SenderID      (#PCDATA)>
    <!ELEMENT XMLReferenceNumber  (#PCDATA)>
    <!ELEMENT ContainerID      (#PCDATA)>
    <!ELEMENT ModeOfTransport  (#PCDATA)>
    <!ELEMENT MRN              (#PCDATA)>
    <!ELEMENT DocumentType    (#PCDATA)>
    <!ELEMENT TransactionStatus (#PCDATA)>
    <!ELEMENT ValidityDate    (#PCDATA)>
    <!ELEMENT AttachmentName   (#PCDATA)>
    <!ELEMENT BinaryAttachmentData (#PCDATA)>
  ]><CustomsEnvelope>
<SenderID>97</SenderID>
<XMLReferenceNumber>097000000002</XMLReferenceNumber>
<ContainerID>MSCU8251020</ContainerID>
<ModeOfTransport>TR</ModeOfTransport>
<TransactionStatus>Cancel</TransactionStatus>
</CustomsEnvelope>

```

## 2 Description of the reply XML message

The envelope for all the included data is named <ReplyLetter>.

The reply messages for a transaction will be sent within the hour of receiving the original request.

### 2.1 *Description of the different parameters in the envelope*

#### 2.1.1 ClientID

The unique identification of the HNN customs desk customer that sent the original message.

#### 2.1.2 XMLReferenceNumber

The Reference number that was included in the original message.

#### 2.1.3 Status

Gives the status of the reply message and can contain three values :

- OK
- ERROR
- CLOSED

OK is sent just to indicate that the message has been correctly received.

ERROR is sent when the message could not be processed.

CLOSED is sent when all containers for the given XMLReferenceNumber have left the HNN premises.

#### 2.1.4 StatusCode

Gives a code to indicate the OK status or the Error encountered, include both the code and the explanation :

- 00-Message received OK
- 01-No XMLReferenceNumber given
- 02-No ContainerID given / Duplicate ContainerID given / Invalid ContainerID given
- 03-No DocumentInfo given
- 04-'Replace' without valid XMLReferenceNumber
- 05-'Cancel' without valid XMLReferenceNumber
- 06-XMLReferenceNumber already exists for this Original
- 07-Transaction Closed
- 08-Syntax Incorrect
- 09-Incorrect ModeOfTransport
- 10-Invalid Transaction Status
- 30-ValidityDate Incorrect
- 31-Invalid MRN
- 32-Invalid Document Type
- 33-Invalid Attachment Name
- 34-Invalid Binary Attachment Data
- 35-Empty Binary Attachment Data
- 40-Document type '{0}' not allowed for Mode of transport '{1}'

Some of these status codes can be more specific, e.g. 08-Syntax Incorrect gives a more detailed description of the encountered error.

## 2.2 Examples

### Example 1 : Reply without problems

```
<?xml version="1.0"?>
<!DOCTYPE ReplyLetter [
  <!ELEMENT ReplyLetter
(ClientID,XMLReferenceNumber,Status,StatusCode)>
  <!ELEMENT ClientID      (#PCDATA)>
  <!ELEMENT XMLReferenceNumber  (#PCDATA)>
  <!ELEMENT Status        (#PCDATA)>
  <!ELEMENT StatusCode     (#PCDATA)>
]>
<ReplyLetter>
<ClientID>004</ClientID>
<XMLReferenceNumber>004000000352</XMLReferenceNumber>
<Status>OK</Status>
<StatusCode>00-Message received OK</StatusCode>
</ReplyLetter>
```

### Example 2 : Reply with an error message

```
<?xml version="1.0"?>
<!DOCTYPE ReplyLetter [
  <!ELEMENT ReplyLetter
(ClientID,XMLReferenceNumber,Status,StatusCode)>
  <!ELEMENT ClientID      (#PCDATA)>
  <!ELEMENT XMLReferenceNumber  (#PCDATA)>
  <!ELEMENT Status        (#PCDATA)>
  <!ELEMENT StatusCode     (#PCDATA)>
]>
<ReplyLetter>
<ClientID>124</ClientID>
<XMLReferenceNumber>124000004662</XMLReferenceNumber>
<Status>ERROR</Status>
<StatusCode>06-XMLReferenceNumber already exists for this
Original</StatusCode>
</ReplyLetter>
```

### Example 3 : Message sent when the transaction is closed

```
<?xml version="1.0"?>
<!DOCTYPE ReplyLetter [
  <!ELEMENT ReplyLetter
(ClientID,XMLReferenceNumber,Status,StatusCode)>
  <!ELEMENT ClientID      (#PCDATA)>
  <!ELEMENT XMLReferenceNumber  (#PCDATA)>
  <!ELEMENT Status        (#PCDATA)>
  <!ELEMENT StatusCode     (#PCDATA)>
]>
<ReplyLetter>
<ClientID>116</ClientID>
<XMLReferenceNumber>116000001864</XMLReferenceNumber>
```

```
<Status>CLOSED</Status>  
<StatusCode>07-Transaction Closed</StatusCode>  
</ReplyLetter>
```

### 3 Available documentation

- TUL Clients Interface Description V4.3
- TUL XML Interface and Protocol Description V2.19
- TUL Server Processes Description V2.2
- TUL Load List for Barges V1.0