



## InterchangeHeader XML format

## MessageHeader XML format

### Document information

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Developed by:	Vidar Wethal – The draft is copied from a document made by Sven Christiansen and Hans Jørgen Kjørstad - Ergo	26.01.2006
Verified by:		
Approved by:		

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0.9	0.9	Developed Interchange- and Message Header as standard header for Messages	26.01.2006
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# 1. Introduction

## 1.1. General

This document is a textual description of a format that is used for addressing electronic business documents.

The XML-schemas for the headers are described in the documents:

- Interchange\_Header\_1.0.xsd

This is the general structure for InterchangeHeader, and is used for addresses and as carrier for information on interchange level.

And

- Message\_Header\_1.0.xsd

That describes the general structure for MessageHeader and is used for addressing and carrier for information on message level.

In addition to elements for addresses and references, it also contains groups of elements that can be used to determine how the message should be processed on the receiving side. The way to build this instruction is regulated by an agreement between the sender and receiver, and the structure that is used (ANY-elements) allow for the parties to use own defined elements within these groups. The only limitation is to avoid using element names that is already defined in the headers or in the message itself since; there is no use of namespace in the headers.

Every eInvoice operator (FMS) will have implemented his own use of this free elements, and there will be a separate implementation guide that describes this.

An interchange can be divided in 3 different main sections:

- Interchange level (InterchangeHeader). This header should always be put first in the interchange. The actual schemadefinition does not require the header, but if the interchange is a part of a transmission that uses more than one eInvoice Operator, the InterchangeHeader must be percent.
- Message level (MessageHeader). This Header should be placed in front of **every** business document, and contains elements that describes the document that follows the header. This header is not mandatory in the schema definition, but if the interchange is a part of a transmission that use more than one eInvoice Operator, the MessageHeader must be percent.
- Document level. The actual document/message that should be sent as a part of the interchange.

## 1.2. Format descriptions

The detailed descriptions is given as a XML-schema, that also contains any rules that is applied. The schemas is defined in documents already listed in chapter 1.1.

The rules for use of elements types as dates, time, decimal numbers etc. all follo9w normal e2b notation.

Because the format is very flexible defined, special documentations that describe the specific use for a specific implementation could be needed. This always will be the case if the parties decides to use the any structure in the headers to exchange information that is not described in this document.

## 2. High level description

### 2.1. General

This chapter describes the main structure that is used in the headers and where the different groups of information is used on different levels in the interchange. The description is partly given as plain textual description, and partly as examples. The headers is divided into 2 different levels.

#### Interchange level (InterchangeHeader):

The Interchangeheader is used once for each interchange and contains as a rule, the address to the first receiver.

#### Message level(MessageHeader):

The MessageHeader contains generic elements for the actual business document. The MessageHeader should be placed in front of every business document. The addressformation for this header will be from the firs sender to the end receiver.

### 2.2. InterchangeHeader (generic)

#### 2.2.1 Elements with a special content

**InterchangeId** is a reference that is used as a unique reference for the interchange, and it must be unique for the certain issuer for all the interchanges and type of interchanges from this issuer. The InterchangeId is used also for receipts that is sent to the issuer, and the issuer need to relate to this ID.

The use of the address elements is strictly defined, and the content of Address, Sub address and Addressqualifier must be known by the recipient, and also by any intermediate points in the communication line. The use of the content in Address and Sub address is determined by the content of the element Address qualifier

#### 2.2.2 Examples

To show the use for a generic interchange we show two examples. First we show n example where only the required elements is used, and the an example where all the different options is described, and that can be used for specific requirements.

As previously mentioned the processing options is used if the issuer need the interchange to be treated a special way at the receiving point. If given on the interchange level the instructions is valid for all the interchange, but could be overruled on the message level.

#### **Example (required elements):**

```
<?xml version="1.0" encoding="UTF-8"?>
<InterchangeHeader>
  <!--The formatversion -->
  <Version>1.0</Version>
  <!-- Unique (pr issuer) reference for this interchange. All later messages
  (receipts+++) that refer to this interchange will use this reference. The reference
  must be unique for all interchanges from the same issuer. -->
  <InterchangeId>UTV-1234567890</InterchangeId>
```

```
<!--      Date and time for the creation for the interchange

<InterchangeTime>2006-01-15T23:00:00</InterchangeTime>

<!--      Information about the issuer
      Address:          Usually the organization number (Brønnøysund)
      SubAddress:       Usually department (if used)
      AddressQualifier:  Code that tell which type of address that is used.

                        Default is "OrgNr-Avd" that means that the address is
                        Put together of an organization number and optionally
                        use of department/unit. The way to use the address elements when communicating via
                        several eInvoice Operators is described in an own chapter.  -->
<Originator>
  <Address>987654321</Address>
  <SubAddress>Avdeling 1</SubAddress>
  <AddressQualifier>OrgNr-Avd</AddressQualifier>
</Originator>

<!--Information about the receiver of the interchange
      The same rules applies to the elements as above.  -->
<Recipient>
  <Address>976117840</Address>
  </SubAddress>
  <AddressQualifier>OrgNr-Avd</AddressQualifier>
</Recipient>

</InterchangeHeader>
```

### Example (with optional elements):

```
<?xml version="1.0" encoding="UTF-8"?>
<InterchangeHeader>

  <Version>1.0</Version>
  <InterchangeId>UTV-1234567890</InterchangeId>
  <InterchangeTime>2006-01-15T23:00:00</InterchangeTime>
  <Originator>
    <Address>987654321</Address>
    <SubAddress>Avdeling 1</SubAddress>
    <AddressQualifier>OrgNr-Avd</AddressQualifier>
  </Originator>

  <Recipient>
    <Address>976117840</Address>
```

```
        </SubAddress>
        <AddressQualifier>OrgNr-Avd</AddressQualifier>
    </Recipient>
    <!-- Receiptnotification (YES/NO) -->
    <ReceiptNotificationRequest>YES</ReceiptNotificationRequest>

    <!--      When a receipt is asked for, the sender could ask that another reference
               than the interchange reference is used in the receipt. The element is only
used if the interchange reference should not be used.
    -->
    <ReceiptNotificationType>

    <ReceiptNotificationReference>UTV-1234567890</ReceiptNotificationReference>

    <!--      Customer specific processing instructions. Must be defined between the
               parties in specific interchange relation.
    -->
    <ProcessInstructions/>

</InterchangeHeader>
```

## 2.3. MessageHeader, generic elements

### 2.3.1 Elements with a specific content

**MessageReference** is a reference to the documents in the interchange and should at least be unique within the interchange. Message reference is often used for tracking purposes at the eInvoice Operator.

The use of the address elements is strictly defined, and the content in Address, Subaddress and Addressqualifier must be known by the receiver. The content of Address and Subaddress is controlled by the content in Addressqualifier.

### 2.3.2 Example of Use

In the messageheader there are defined some generic elements that is common and not dependant of the business document that is a part of the interchange. These generic elements is described in this chapter. Also for this header vi describe the structure with an example using only the mandatory elements, and one example showing the optional elements.

#### Example (minimum):

```
<MessageHeader>

  <!-- Type of business document that follow.
  -->
  <DocumentType>
    <DocumentCode>380</DocumentCode>
    <DocumentDescriptiveName>FAKTURA</DocumentDescriptiveName>
  </DocumentType>

  <!-- Unique (At least within the interchange) message reference
  -->
  <MessageReference>8912739</MessageReference>

  <!--What committee responsible for the message definition -->
  <MessageOwner>e2b</MessageOwner>

  <!--The type of message for the business document to follow -->
  <MessageType>e2bInvoice</MessageType>

  <!--The message version for the message definition in use -->
  <MessageVersion>3.3</MessageVersion>

  <!--Language used in the business document -->
  <language>NO</language>
```



```
<!-- Sender ("Invoice Issuer")
-->

<MessageOriginator>
  <Address>987654321</Address>
  <SubAddress>Department 1</SubAddress>
  <AddressQualifier>OrgNr-Avd</AddressQualifier>
</MessageOriginator>

<!-- Receiver ("Invoicee")
-->

<MessageRecipient>
  <Address>987654322</Address>
  <SubAddress>Department 2</SubAddress>
  <AddressQualifier>OrgNr-Avd</AddressQualifier>
</MessageRecipient>

</MessageHeader>
```

**Example (with options):**

```
<MessageHeader>

  <!-- Type of businessdocument that follow.
  -->
  <DocumentType>
    <DocumentCode>380</DocumentCode>
    <DocumentDescriptiveName>FAKTURA</DocumentDescriptiveName>
  </DocumentType>

  <!-- Unique (At least within the interchange) message reference
  <MessageReference>8912739</MessageReference>

  <!-- What committee responsible for the message definition -->
  <MessageOwner>e2b</MessageOwner>

  <!-- The type of message for the businessdocument to follow -->
  <MessageType>e2bInvoice</MessageType>

  <!-- The message version for the message definition in use -->
  <MessageVersion>3.3</MessageVersion>

  <!-- Language used in the businessdocument -->
  <language>NO</language>
```

```
<!--Type of document that follow, K = CostInvoice, V = Goodsinvoice, T =
ServiceInvoice-->

<DocumentContent>K</DocumentContent>

<!--Code to state if any particular business line is used for the businessdocument.
The legal values are: 1=Kort 2=Reise 3=Telecom 4=Transport 5=Frakt
6=Energi 9=Generelle varer
-->

<LineOfBusiness>Telecom</LineOfBusiness>

<!-- Sender ("InvoiceIssuer" FU) -->
<MessageOriginator>
    <Address>987654321</Address>
    <SubAddress>Department 1</SubAddress>
    <AddressQualifier>OrgNr-Avd</AddressQualifier>
</MessageOriginator>

<!-- Receiver ("Invoicee" FM) -->
<MessageRecipient>
    <Address>987654322</Address>
    <SubAddress>Department 2</SubAddress>
    <AddressQualifier>OrgNr-Avd</AddressQualifier>
</MessageRecipient>

<!--      Processing instructions negotiated between the parties exchanging
documents. The use must be documented in every single setup.
-->
<ProcessInstructions/>

<!--      The element FormatOptions, can contain any structured content. This could
be information that is to be exchanged between the parties regardless of the type of
businessdocument used in the exchange.
-->
<FormatOptions/>

<!--      The use and rules for attachments is defined in chapter 3.2
-->
<Attachment/>

</MessageHeader>
```

## 3. Additions and Options

Detailed definition of the structure can be seen in the schema definitions. This chapter define the functional use of this additional elements.

- FormatOptions
  - This element is used to give options that is format/customer related and that is transported transparently thru any eInvoice Operators. An Invoice issuer should not expect an Invoice receiver to understand the meaning of this elements. The use of this options must in all cases be defined directly between two parties.
- Process Instructions
  - This elements are used to give options related to the way that the interchange should be processed in the eInvoice Operator. The instructions could be used by the issuer to reclaim a certain treatment that is not the standard way to process the document in the eInvoice Operator
- Attachment
  - This element group is used to pass references to any attachment that is connected to the businessdocument. It is used to tell what attachment that follow, and what characteristics these attachment have.

### 3.1. Attachment

An Invoice issuer could send attachment connected to the businessdocument in several ways.

The structure of the messageheader is defined in a way that makes it possible to reference one or more attachments that is transported as separate files.

#### 3.1.1. Attachment reference

Below follows some examples on how to reference attachments in the interchange. Attachment is placed in the MessageHeader.

Example for attachment to an invoice. (Three different attachment where the attachments are referenced alternatively).

```
<Attachment>
```

```
<!-- Attachment can be referenced in 3 different ways:
      1. Files that are referenced by name, that must be unique for an issuer
      2. As an URL to an external source
      3. Included in the format as CDATA
-->
```

```
<!-- File example (first attachment) -->
<Attachment type="FILE">
    <!-- A running number for each attachment. Used to inform the receiver if the
attachment should be sorted in a special way.
-->
    <AttachmentNumber>1</AttachmentNumber>

    <!-- Used to tell if the attachment is a visual copy for the business document. --
>
    <CopyIndicator>NO</CopyIndicator>

    <!--Type of attachment (MIME standard)
        * This is used as a parameter to choose the application for reading the
attachment -->
    <AttachmentType>application/msword</AttachmentType>

    <!-- Attachmentname where the extension could be used to tell the application
to use for reading. The name must be unique for this issuer. The standard for the
attachment name is <Orgnumber_issuer>##<Unique filename> -->
    <AttachmentName>9999999999#Vedlegg_1.doc</AttachmentName>
    <AttachmentLocation/>
</Attachment>
<Attachment>
<!--Example with reference to URL -->
<Attachment type="EXTERNAL">
    <!-- <Number for the attachment, used for ordering the attachments -->
    <AttachmentNumber>2</AttachmentNumber>
    <!--Set to YES if the attachment is a visual copy of the business document -->
    <CopyIndicator>NO</CopyIndicator>

    <!--Attachment type (MIME standard)
        * This element could be used to tell what application that should be used
for reading the attachment -->
    <AttachmentType>text/html</AttachmentType>

    <!-- EXTERNAL url that is a reference to an attachment-->
    <AttachmentLocation>https://eeb.no/attachments?attach019823901
    </AttachmentLocation>
</Attachment>

<!--Example where attachment is included as a part of the message -->
<Attachment>
<Attachment type="INCLUDED">
    <AttachmentNumber>3</AttachmentNumber>
    <CopyIndicator>NO</CopyIndicator>
```

```
<AttachmentType>application/excel</AttachmentType>
<AttachmentName>Trafikkoversikt-jan-04.xls</AttachmentName>

<!-- The attachment is inside Custom Content, coded as base64 -->
<CustomContent>
  <![CDATA[ -- EXCEL, formatted as "base 64" -- ]]/>
</CustomContent>

</Attachment>
```

### **3.2. Special options used for attachment archive**

The parties in an interchange could thru the use of format options and process instructions give information if there should be a special treatment of the attachments referenced in the header. The use of these elements must be documented between the specific parties.

## 4. Special rules for headers, when used in intermediate transfer

When an interchange that takes place between parties that requires interconnection between eInvoice operators, there are defined special rules to take care of the address information.

### 4.1. Use of adresselements

#### 4.1.1 Addressing in the interchangeheader

```
<Originator>
  <Address>ID for FMS as sender</Address>
  <SubAddress></SubAddress>
  <AddressQualifier>OrgNr-Avd</AddressQualifier>  -- Fixed value
</Originator>

<Recipient>
  <Address>ID for FMS as receiver</Address>
  <SubAddress></SubAddress>
  <AddressQualifier>OrgNr-Avd</AddressQualifier>
</Recipient>
```

#### 4.1.2 Addressing in the messageheader

This way of addressing makes it possible for an eInvoice Operator to avoid the registration of the Invoice issuer that belongs to another eInvoice Operator. The address elements should be used in this way.

```
<MessageOriginator>
  <Address> ID for FMS as sender</Address>
  <SubAddress>ID for invoice issuer</SubAddress>
  <AddressQualifier>samtrafikknude</AddressQualifier>  -- Fixed value
</MessageOriginator>

<MessageRecipient>
  <Address>ID for Invoicee</Address>
  <SubAddress>Optional unit for the Invoicee</SubAddress>
  <AddressQualifier>OrgNr-Avd</AddressQualifier>
```

---

```
</MessageRecipient>
```

## **4.2. Message type and version**

The following elements, indicating which format that is used for the business content, must be filled out with the version that is currently in use. Here is an example:

```
<MessageHeader>  
  <MessageType>e2bInvoice</MessageType>  
  <MessageVersion>3.3</MessageVersion>
```

## **4.3. Format for message content when exchanging invoices**

E2bb version 3.3 (with future upgrades), will be used as format for message content.

The schemas for e2b, including header definitions is attached to this document.