

**Finvoice Implementation  
Guidelines  
Version 1.3  
23. May 2011**





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## 1 What is Finvoice?

The Finvoice message can be used for invoicing and for other business messages, such as quotations, orders, order confirmations, price lists, etc. Due to easy adoption, it is suitable for invoicing between companies of all sizes and for consumer invoicing.

Finvoice is defined using XML syntax. XML enables the invoice to be represented both in a form understood by the application and, using a browser, in a form corresponding to a paper invoice. The browser representation of an invoice may be printed as a hard copy and processed in the traditional way.

The first version of the Finvoice message was released in 2003, version 1.1 in 2004, and version 1.2 at the beginning of 2005. All versions of Finvoice 1.x are backwards compatible. Maximum field lengths were not specified in Finvoice 1.1. They are specified as of version 1.2.

## 2 General description of the Finvoice forwarding service

The Finvoice electronic invoice implementation guidelines and the DTD, XSD, and XSL files required for formal verification of the invoices are freely available on the Website of the Federation of Finnish Financial Services at [www.finvoice.info](http://www.finvoice.info).

All Finvoice versions must validate with the Finvoice schema. Software Provider is responsible for ensuring that the software makes schema valid e-invoices. Finvoice 1.2 version will be validated in banking channel against DTD. The Service Providers will validate version 1.3 against schema and invoice must have a reference to the xsd.

### Version 1.2:

```
<!DOCTYPE Finvoice SYSTEM "Finvoice.dtd">
```

### Version 1.3:

```
<Finvoice Version="1.3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
xsi:noNamespaceSchemaLocation="Finvoice.xsd">
```

The Finvoice invoice, which is against the schema, will be rejected with error code 6.

Finvoice and e-invoice are trademarks registered by the Federation of Finnish Financial Services that can be used only when the forwarding service complies with the valid Finvoice forwarding service description and terms and conditions for all parts. The Federation of Finnish Financial Service owns the copyright to the descriptions and terms and conditions of the Finvoice forwarding service.

The use of the Finvoice forwarding service requires that both the sender and the receiver have signed an agreement on the Finvoice forwarding service with their Service Provider. Consumers agree with their Service Provider on the reception of e-invoices to the Web bank or Web payment service.

The seller will generate an invoice corresponding to the description together with transmission frames and send it to the buyer via its Service Provider.

The buyer transfers the invoice information to its own systems or views the invoice in a browser. The invoice may be printed from the browser and processed in the traditional way.

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Customers receiving and sending e-invoices can fetch each other's addresses from the e-invoice address service maintained by Tieke. The site lists the company name, identifiers for sending and receiving, and Service Provider codes.

Another customer that uses the Finvoice forwarding service can be identified on the basis of the Service Provider code related to the address. In this case, this code is the Service Provider's own BIC code. Both parties have signed an agreement on the Finvoice forwarding service with their Service Provider and agreed on the same service terms and conditions.

### 3 Consumer's e-invoice

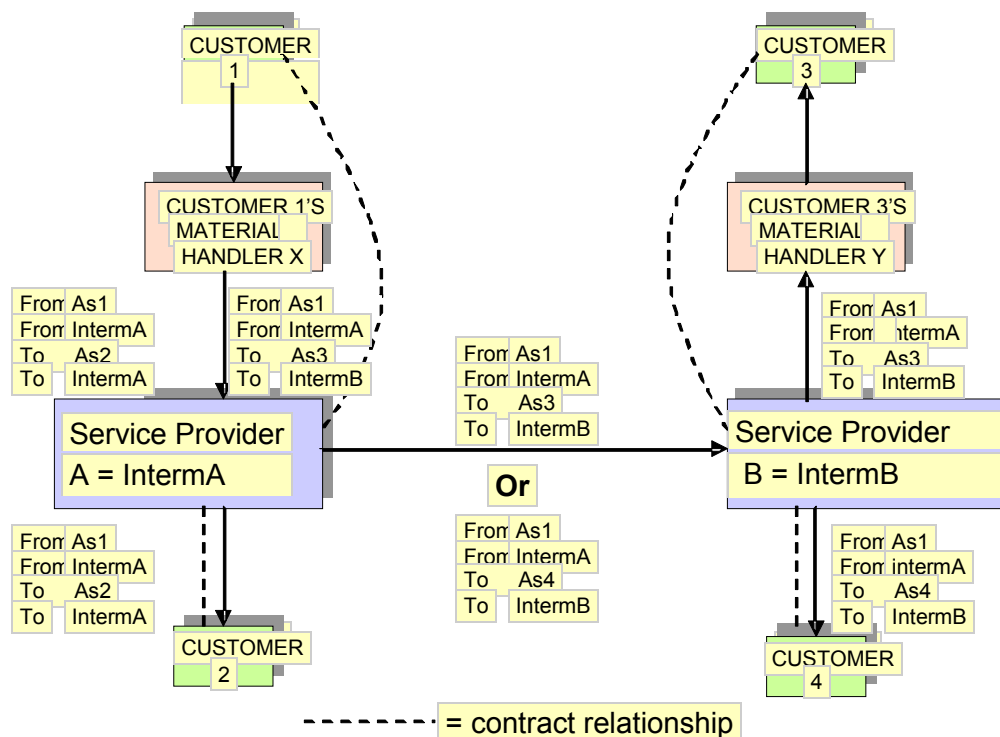
A consumer e-invoice is a Finvoice e-invoice that consumers receive in their Web bank or Web payment service.

The sender informs customers using a Web bank or Web payment service of the sender's invoicer information by means of a FinvoiceSenderInfo message. On the basis of the message, the Service Provider makes the information available for the Customer in the Web bank or Web payment service. The customer's address information will be forwarded by means of a FinvoiceReceiverInfo message to the Sender.

The message description of the notification service, technical files, and the consumer communication material related to the consumer e-invoice are freely available on the Web site of the Federation of Finnish Financial Services at [www.e-lasku.info](http://www.e-lasku.info).

### 4 Using a Material Handler in the Finvoice forwarding service

A material handler can be, for example, a service company, accounting firm, e-invoice operator, etc. In the Finvoice forwarding service, the Service Provider always identifies the original sender and receiver.





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INV04	INTERNAL INVOICE	
INV05	COLLECT NOTE	
INV06	PRO FORMA INVOICE	
INV07	REBATE INVOICE	Credit Note made by purchaser
INV08	REMINDER INVOICE	
TES01	TEST INVOICE	Test Invoice
PRI01	PRICE LIST	Price List
INF01	INFORMATION	This can be the minimum data of the invoice. Message is written on the rows of the RowFreeText element.
DEN01	DELIVERY ERROR NOTIFICATION	Delivery error notification
SEI	SECURE INVOICE	Secure Invoice (An invoice that requires special handling. For example, the invoice contains patient information.) The use of a secure invoice must be agreed upon separately with the Service Provider.

InvoiceTypeCode and InvoiceTypeText may be sector-specific, in which case the sector of business is responsible for publishing and maintaining the values to be used.

**Note!** InvoiceTypeCode and InvoiceTypeText only apply to the browser representation of the message. The total message amount consists of invoice rows, which may be positive or negative. The total message amount is the sum of the rows and may thus be positive or negative. If the message amount is negative, the message may be called a credit note. If the credit note code INV02 is used, the total amount must be negative; otherwise, the message must be rejected as its meaning is unclear. The total amount of a message with the code INV01 can be either positive or negative.

**Using the OriginalInvoiceNumber element in credit notes, reminder notes, and interest notes:** The element specifies the identifier of the original invoice. If credit notes or interest invoices are associated with several different invoices, the identification information for the original invoices shall be specified at the row level in the OriginalInvoiceNumber element.

### ***9.13 BuyerSellerIdentifier and SellerBuyerIdentifier***

The required customer numbers are specified in the BuyerSellerIdentifier and SellerBuyerIdentifier elements.

### ***9.14 PaymentTermsDetails***

If the invoice includes a conditional discount such as a cash discount, the tax authorities' guidelines specify that the amounts payable on different due dates, or at least the value of such a conditional discount including tax, must be pre-calculated. The amount of the discount including tax is specified in the CashDiscountAmount element.

The due date of the payment (according to the normal terms of payment) is also specified in the EpiDateOptionDate element of the EPI.

The guidelines given by the Finnish Consumer Agency specify that a company should send an e-invoice to the consumer so that there is a period of two weeks at minimum between the invoice sending date and the invoice due date.



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The VAT amounts, amounts excluding VAT, and the amount of VAT related to the discount are specified in the corresponding elements.

#### ***9.15 PaymentStatus***

Payment status specifies whether the invoice has been paid. The payment method must be indicated for paid invoices. Partial payment and instalments of the invoice shall be indicated in the PartialPayment part.

The PaymentStatusCode for a invoice paid for by card or cash is PAID, and the amount in the EpiInstructedAmount element of the EPI must be 0,00.

#### ***9.16 VirtualBankBarcode***

A virtual bar code can be added to the invoices that should be printed. The start character (Start Code C) in the structure of a bar code, authentication code 2 (Check character/Modulo 103 checksum) or the stop character (Stop character) will not be printed in the virtual bar code. 54 digits will be printed in the virtual bar code.

#### ***9.17 InvoiceRow***

The unit price is the price of the product or service exclusive of tax. Depending on the invoicing system or an agreement between the seller and buyer, it is multiplied either by the DeliveredQuantity or the ConfirmedQuantity element value. ConfirmedQuantity is used if an entire confirmed order is invoiced in one instalment even though the goods are delivered in batches.

The OrderedQuantity element can be used to indicate the ordered quantity.

The unit price can be entered exclusive or inclusive of tax, according to the invoicing policy and the tax authorities' VAT guidelines.

#### ***9.18 DefinitionDetails***

The invoice row can contain an additional description of a product or service. The header of a data item and a code that corresponds to the header are specified in RowDefinitionHeaderText. Codes should be defined for each sector. The data item that corresponds to the header and its code are specified in the RowDefinitionText element. In addition, a value can be specified to that data item in the RowDefinitionValue element.

#### ***9.19 Discounts on invoice rows***

Discounts may be granted at the row level or as chained discounts.

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rows. No summary invoices are generated from invoices transmitted as Finvoice messages. SubInvoiceRow can be used to



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</SpecificationDetails>

### 9.23 ePIDetails

The EPI contains the data, provided by the payer, necessary for creating the payment instruction to be delivered to the bank. The EPI is designed for transferring both national and international payment orders. The EPI enables automatic processing from payer to recipient via Service Providers.

The EpiInstructedAmount element indicates the amount that the sender has specified to be paid.

In Finland, the EpiRemittanceInfoIdentifier element always contains a reference number compliant with the banking standard, with no spaces and padded with leading zeros. The attribute SPY indicates the reference number standard of the Federation of Finnish Financial Services.

The EpiAccountID element contains the payee's account number in IBAN format. The account number shall be specified in electronic format in accordance with instructions issued by each country; in Finland, for example, the IBAN consists of 18 characters. With **IBAN- account number you should have banks BIC-code in EpiBfiIdentifier-field as well.**

The EPI is described in the ECBS standard number EBS 602. Some of the data elements specified as mandatory in the standard are not used in Finland.

The EpiPaymentInstructionId element must contain the same information as the PaymentInstructionIdentifier element of the SenderInfo message. The information is mandatory in consumer e-invoices because it makes it possible to make automatic payments in a Web bank.

EpiNameAddressDetails field is mandatory because the recipient's name is necessary for creating the payment.

### 9.24 LayOutIdentifier

This element can be used to specify the name of a separate XSL style sheet agreed between the sender and the Service Provider. This style sheet can then be used by the Service Provider to create an invoice image in the Web bank according to the Sender's wishes. If this field is not in use, the invoice image specified by the Federation of Finnish Financial Services (Finvoice.xsl) is used.

### 9.25 InvoiceSegmentIdentifier

This element can be used to specify marketing segment information for the receiver to add a desired marketing link, specific to this receiver, to the invoice links section.

### 9.26 Invoice Calculation Rules

Depending on the sender's invoicing method, the total amount of the invoice is calculated on the basis of either the delivered, ordered, or confirmed quantity.

#### **InvoiceTotalVatIncludedAmount**

Calculated by adding up the RowAmount elements in an InvoiceRow.

#### **InvoiceTotalVatExcludedAmount**

Calculated by adding up the RowVatExcludedAmount elements in an InvoiceRow.

#### **InvoiceTotalVatAmount**

Calculated by adding up the RowVatAmount elements in an InvoiceRow.





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## **InvoiceVatSpecificationDetails aggregate information**

### **VatBaseAmount**

The total of RowVatExcludedAmount elements by VAT class.

### **VatRateAmount**

The total of RowVatAmount elements by VAT class. The total amount must be calculated starting from the row level, otherwise the VAT amount will not match the row-level information.

**VatSpecificationDetails can be repeated according to tax rates and currencies. In accordance with the guidelines by the taxation authority, taxes must be presented at least in euro in domestic invoices in Finland.**

### **EpiInstructedAmount**

The amount specified by the sender as the amount to be paid.

## **10 Use of links in Finvoice e-invoices**

The message may include a link to visualisation services provided by an invoice operator, seller's offers, or invoice attachments, for example. The text corresponding to the URL is written in the InvoiceUrlText element.

When the invoice has arrived at the Web bank or Web payment service and the payer clicks the link on the invoice, the payer is transferred to an "intermediate page". This page displays a message about the payer being transferred to a service outside the Service Provider, and requests confirmation. The page behind the link is opened in a separate window, and it is not possible to return to the Service Provider's service from this window.

Confidential customer information may not be transmitted in the link. The sender is responsible for the links, their operation, and the content of his service, and for ensuring that the information security of the bank, its customer, or a third party is not endangered when using the links. The links must use encryption approved by the Service Provider, and the customer-specific information displayed through them must be appropriately protected.

The Service Provider has the right to prevent the use of the links if they endanger the security of transactions.

### ***10.1 Link created by the sender***

A Finvoice e-invoice includes several data fields where the sender may insert a link. The link may lead to the sender's public Web site, for example. The link is placed as such in the InvoiceUrlText element, for example. The sender is responsible for the correctness and content of the link. When the invoice is visualised by means of a style sheet according to the Finvoice standard, the link is shown to be active.

Confidential information, such as a plain-text social security number, card number, payer-customer's account number, or other sensitive information may not be transmitted in the link data.

### ***10.2 Link created by the Service Provider***

In order to improve the security of the information presented behind the link, or to display personalised information, the Service Provider may create a link for the consumer from the Web bank or Web payment service. The link can point to the sender's server or to the server of the display



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archive used by the sender. Web bank link technology – the technical description of which is available on the Web site of the Federation of Finnish Financial Services – is used for creating a link.

The sender and/or the company maintaining the display archive must agree on the use of the service with the Service Provider before starting to use the service.

The sender first writes the display archive identifier agreed with the Service Provider (business ID without a hyphen, 8 characters) and after that the identifier identifying the invoice attachments in the display archive (max 60 characters) in the InvoiceUrlText element. The data is written in the same field and separated from other data elements with a '+' character. The maximum length of this element is 69 characters. The identifiers used must be the same in all Service Providers.

For example:

```
<InvoiceUrlText>12345678+102030FK405060708091011121314156</InvoiceUrlText>
```

The sender or the party maintaining the sender's display archive is responsible for constructing the functionalities necessary for interpreting the Web bank links in its own service. The sender and/or the company maintaining the display service deduces the party to whom the document behind the link is to be displayed on the basis of the information obtained from the link. The Service Provider produces the information necessary for the deduction in connection with the link. The sender and/or the party providing the display service may not use the information in the link for transferring the consumer to a separate transaction service or to a third party's service without a separate Service Provider-specific agreement. When the link is created, the Service Provider checks that a link agreement with the sender and/or the company maintaining the display archive exists.

## 11 Description of the SOAP frame

The frame is based on a recommendation by the ebXML project where the message is passed using the SOAP envelope structure. The use of frames in Finvoice transmission deviates from the ebXML 2.0 recommendation with regard to the use of the To and From elements, because the decision was made before the final approval of the ebXML recommendation.

Messages can be sent and received using the same security technology and communication channel used for other message traffic with the party in question.

**Note!** One frame is always associated with exactly one message, such as an invoice.

The file sent to the Service Provider may include several Finvoice messages. Each message must include a transmission frame (SOAP) specifying the sender, recipient and Service Provider data. The Service Provider routes the message to its recipient on the basis of frame data.

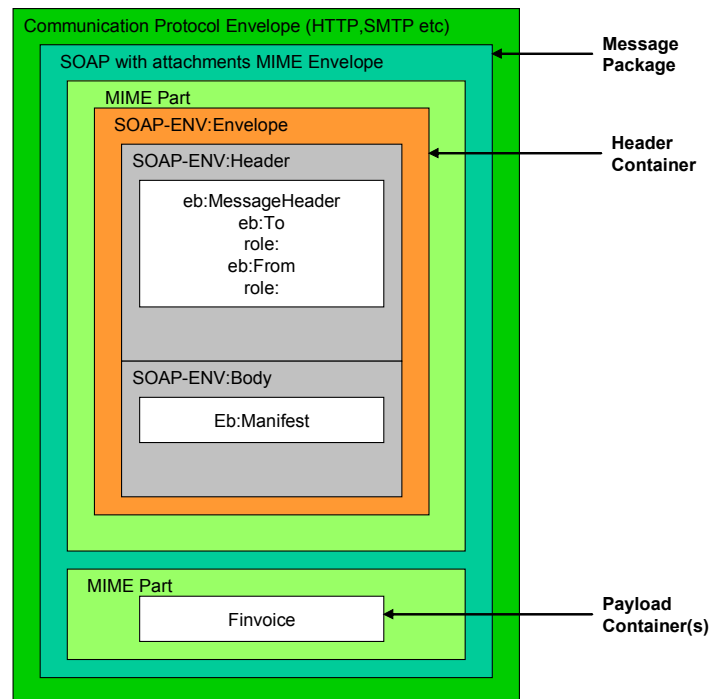
The frame structure enables the use of digital signatures when required, if they will be implemented in the future.

### 11.1 Structure of the SOAP frame

The message structure includes a Mime multipart structure that contains designated parts for SOAP, the ebXML header and Finvoice. The Mime multipart structure is not used when forwarding invoices through Service Providers. The actual invoice is transmitted outside the frame.

The figure illustrates the message structure. The header part includes the identification data of the sender(s) and the receiver. The actual XML message reference is in the SOAP-ENV:Body. The frame is SOAP 1.1 compliant. In SOAP 1.2, the namespace must be: <http://www.w3.org/2001/12/soap-envelope> and mustUnderstand="true", but no other changes are required.

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Elements related to invoice signing can be added to the frame later.

## 11.2 An example of a frame

The file starts at the <SOAP-ENV:... element.

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns:eb="http://www.oasis-open.org/committees/ebxml-msg/schema/msg-header-2_0.xsd">
<SOAP-ENV:Header>
<eb:MessageHeader xmlns:eb="http://www.oasis-open.org/committees/ebxml-msg/schema/msg-header-2_0.xsd" SOAP-
ENV:mustUnderstand="1" eb:id="1009">
<eb:From>
<eb:PartyId>FI5631990010001159</eb:PartyId>
<eb:Role>Sender</eb:Role>
</eb:From>
<eb:From>
<eb:PartyId>HANDFIHH</eb:PartyId>
<eb:Role>Intermediator</eb:Role>
</eb:From>
<eb:To>
<eb:PartyId>00371234567800001</eb:PartyId>
<eb:Role>Receiver</eb:Role>
</eb:To>
<eb:To>
<eb:PartyId>DABAFIHH</eb:PartyId>
<eb:Role>Intermediator</eb:Role>
</eb:To>
<eb:CPAId>yoursandmycpa</eb:CPAId>
<eb:MessageData>
<eb:MessageId>1009</eb:MessageId>
<eb:Timestamp>2008-11-19T14:03:24</eb:Timestamp>
```



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```
</eb:MessageData>
</eb:MessageHeader>
</SOAP-ENV:Header>
<SOAP-ENV:Body>
<eb:Manifest eb:id="Manifest" eb:version="2.0">
<eb:Reference eb:id="Finvoice" xlink:href="1009">
<eb:schema eb:location="http://www.finvoice.info/yrityksen_verkkolasku/ladattavat/Tekniset_tiedostot/schemat/Finvoice.xsd"
</eb:Reference>
</eb:Manifest>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

### 11.2.1 Parts of the example and their descriptions

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:eb="http://www.oasis-open.org/committees/ebxml-
msg/schema/msg-header-2_0.xsd">
<SOAP-ENV:Header>
<eb:MessageHeader xmlns:eb="http://www.oasis-open.org/committees/ebxml-msg/schema/msg-header-
2_0.xsd" SOAP-ENV:mustUnderstand="1" eb:id="1009">
```

The frame uses the SOAP standard envelope and ebXML header as specified in the transport specification (Transport, Routing and Packaging Specification 2.0 at <http://www.oasis-open.org/>). The eb:Id="nnnn" field is not mandatory. The field is used for signed invoices.

```
<eb:From>
<eb:PartyId>FI5631990010001159</eb:PartyId>
<eb:Role>Sender</eb:Role>
</eb:From>
<eb:From>
<eb:PartyId>HANDFIHH</eb:PartyId>
<eb:Role>Intermediator</eb:Role>
</eb:From>
<eb:To>
<eb:PartyId>00371234567800001</eb:PartyId>
<eb:Role>Receiver</eb:Role>
</eb:To>
<eb:To>
<eb:PartyId>DABAFIHH</eb:PartyId>
<eb:Role>Intermediator</eb:Role>
</eb:To>
```

The From and To tags are always associated with the eb:Role tag that indicates the role of the sender/receiver. In practice, the invoice recipient delivers the recipient's own identifier to the sender in the Receiver role, and the identifier of any Service Provider in the Intermediator role. If the invoice is sent directly to the receiver, the receiver's Service Provider is not required or it may be ignored.

Intermediators use the identifiers specified in the table below. Their eb:Role is Intermediator.

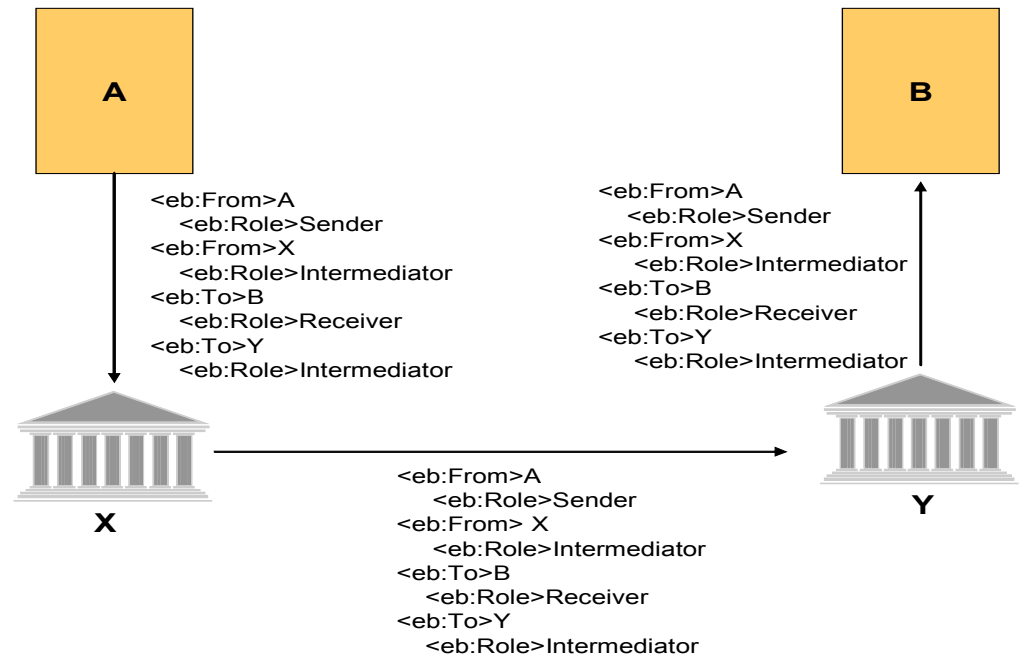


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### An Example of using the From and To Elements



**X= Sender's** Service Provider

**Y= Invoice recipient's** Service Provider

```
<eb:CPAId>yoursandmycpa</eb:CPAId>
<eb:MessageData>
<eb:MessageId>1009</eb:MessageId>
<eb:Timestamp>2008-11-19T14:03:24</eb:Timestamp>
</eb:MessageData>
```

The CPAId is not used in Finvoice forwarding, but is reserved for ebXML-compliant registration services in the future. The value shall be the constant “yoursandmycpa”.

ConversationId is not used when sending or receiving through the Service Providers. ConversationId is a technical identifier uniquely identifying the sent message, used in communication between machines.

Service and Action are intended to be used by each receiver for their own purposes and may mean different things to different receivers. Identification data associated with the message (time stamp and identifier) is specified in MessageData. **The MessageId should be a unique identifier of the invoice that can be used for directing any error feedback.** RefToMessageId is intended for the processing of an acknowledgement message and can be used to refer to the original message.



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```
>
<SOAP-ENV:Body>
<eb:Manifest eb:id="Manifest" eb:version="2.0">
<eb:Reference eb:id="Finvoice" xlink:href="1009">
<eb:schema eb:location=" http://www.finvoice.info/yrityksen\_verkkolasku/ladattavat/Tekniset\_tiedostot/schemat/Finvoice.xsd" eb:version="2.0"></eb:schema>
</eb:Reference>
</eb:Manifest>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Reference to the actual invoice is made in SOAP-ENV:Body. Reference eb:Id identifies the reference specified in the href field, in this case the Finvoice number. The 1009 value can be equal to eb:MessageId. The maximum length of MessageId is 48 characters. The Envelope end tag is the last one.

```
<?xml version="1.0" encoding="ISO-8859-15"?>
<?xml-stylesheet type="text/xsl" href="Finvoice.xsl"?>
<Finvoice Version="1.3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="Finvoice.xsd">
  <SellerPartyDetails>
    <SellerPartyIdentifier>0123456-7</SellerPartyIdentifier>
    <SellerOrganisationName>Pullin Kala Oy</SellerOrganisationName>
    <SellerOrganisationTaxCode>0123456-7</SellerOrganisationTaxCode>
    <SellerPostalAddressDetails>
      <SellerStreetName>Haapatie 7</SellerStreetName>
      <SellerTownName>Helsinki</SellerTownName>
      <SellerPostCodeIdentifier>00100</SellerPostCodeIdentifier>
      <CountryCode>FI</CountryCode>
      <CountryName>FINLAND</CountryName>
      <SellerPostOfficeBoxIdentifier>PL 302</SellerPostOfficeBoxIdentifier>
    </SellerPostalAddressDetails>
  </SellerPartyDetails>
  etc.....
```

An actual invoice containing references to XSL and DTD files is presented above.

## 12 Acknowledgement Message

Each transmission may be acknowledged with an acknowledgement message. The Service Providers **in the Finvoice forwarding service** will only send an acknowledgement message when the invoice cannot be transmitted forward or delivered to the recipient for any reason. The acknowledgement message specifies the information in the original invoice frame. The original invoice frame should include a reference (MessageId) to the invoice with which the acknowledgement message can be matched.

An example of an acknowledgement message:



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## 13 Finvoice technical description

The minimum and maximum lengths of elements are defined in a separate data list.

Optional and mandatory fields are specified as follows:

Occurs	Definition
1	Mandatory, occurs once.
0..1	Not mandatory, but may occur only once.
1..n	Mandatory at least once. May occur several times.
0..n	Not mandatory, but may occur several times.

XML messages consist of the following types of entities: elements, aggregates and structures. An element is a simple entity including only one string of data. An aggregate is a structural entity consisting of elements. A structure is a more complicated entity that includes either aggregates or both aggregates and elements.

### 13.1 Attributes Used in the Implementation Guideline

All monetary amount elements (Amount) are associated with the AmountCurrencyIdentifier attribute, even though the monetary amounts associated with the invoice must be in the same currency. The amount of tax is an exception and must be in the currency of the country of sale. The monetary amounts have a decimal part separated by a comma (.). The number of digits following the comma must not exceed the maximum allowed for the specified currency. A monetary amount may also be negative, in which case it is preceded by a minus sign (-).

Quantity elements have a UnitCode attribute specifying the unit of the quantity.

Date elements (such as InvoiceDate) always have a Format attribute of CCYYMMDD.

The EpiCharge element has a ChargeOption attribute.

### 13.2 Finvoice Structure



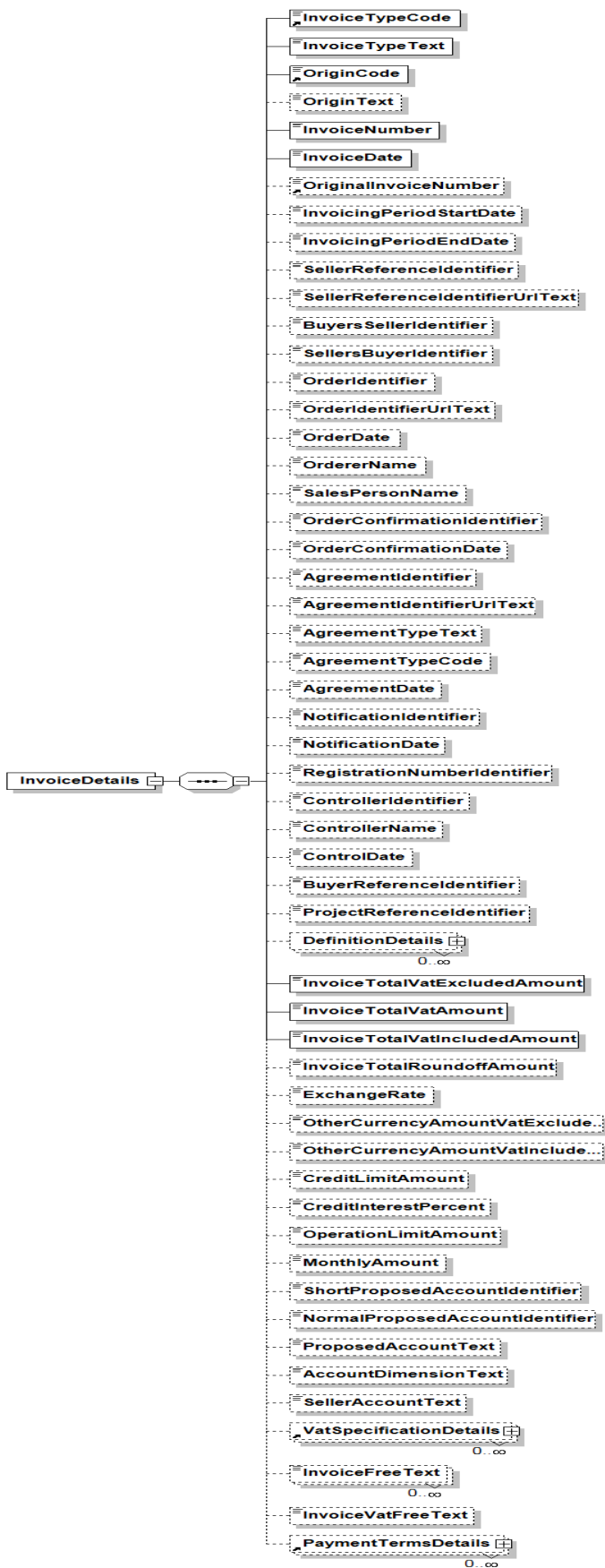
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### 13.3 InvoiceDetails Structure





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### 13.4 InvoiceRow Structure





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