Finvoice Implementation
Guidelines
Version 1.3
23. May 2011
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<th>Page</th>
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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.

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.
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.

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.
5 Descriptions related to the Finvoice forwarding service

The Implementation Guidelines include:
- a description of the electronic invoice structure and data contents covering all invoicing needs;
- a DTD description, that is, a description of the invoice in machine-readable form;
- an XSL description enabling the invoice to be represented in a browser and printed on paper;
- an XSD description (Schema) that is used in the Finvoice testing phase;
- examples of an extensive and concise e-invoice;
- the ebXML transmission frame structure (SOAP) that enables the invoice to be forwarded directly from the seller to the buyer or via a third party;
- free archiving software available on the Federation website at www.finvoice.info; this software can be used to disassemble the invoice frame so that invoices can be managed in their own directory;
- the description and terms and conditions of the Finvoice forwarding service that describes the operation of the banks’ services, agreement practices, and the terms and conditions of the service for the sender and the receiver;
- for consumer invoicing, the www.finvoice.info site includes implementation guidelines for the notification service and software for creating invoicer notifications.

Sector-specific implementation guidelines can be prepared for various sectors. Sector-specific implementation guidelines cannot be in conflict with the Finvoice 1.3 implementation guidelines. Sector-specific guidelines can be published on the Federation website at www.finvoice.info.

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 www.finvoice.info. A Finvoice invoice must include a reference to the style sheet used. This ensures that the invoice recipient sees the invoice information and may save the invoice on his own data medium as necessary.

6 Testing

The generation of an invoice message is always tested using a schema file. In the example files, the reference to schema verification is in the comments. The Service Providers in the Finvoice forwarding service can provide the opportunity to test sending and reception in their services.

7 Finvoice message basic structure and recommendations for use

7.1 Message transmission frame

The transmission frame enables the invoice to be routed from the invoicer to the recipient. The transmission frame is specified in more detail in section “Frame Description” of the implementation guidelines.

7.2 Message structure

At the bare minimum, the message contains the following obligatory data:
- seller’s details
- buyer’s details
- invoice details
- invoice row details
- information provided by the seller for a payment order (ePI)
The minimum and maximum lengths of elements are defined in a separate data list.

Optional fields that contain no data must be omitted.

Each row in the invoice file always starts with a start tag and ends with an end tag. The same is true for transmission frames.
Each row may only contain one element with the associated start and end tags. No spaces are allowed adjacent to the start and end tags, for example to always make the field 35 characters long.

Example:
<SellerOrganisationName>Pullin Musiikki Oy</SellerOrganisationName>

If indentations are used in the invoice materials, the only character allowed for indentation is a blank character or space. Tab characters are not allowed.

The Finvoice forwarding service is not used to convey attachments. In the Finvoice forwarding service, the e-invoice forwarding is based on conveying data, not images or attachments. The receiving customer is able to use the data immediately in its own systems. The SpecificationFreeText field in SpecificationDetails can be used as necessary. The sender can use this field to add formatted specification data, such as sector-specific information. One advantage of the SpecificationFreeText field is that no separate sector-specific style sheet is needed. Finvoice also includes a link that can be used by the receiver of the invoice to view attachments in the service provided by the sender or an authorised material handler.

7.3 Character set used in Finvoice messages

The ISO 8859-15 character set is used in Finvoice messages. In the Finvoice e-invoice, some predefined entities according to the XML standard must be used instead of special characters. The entities are as follows:

<table>
<thead>
<tr>
<th>Char</th>
<th>Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp;</td>
<td>&amp;</td>
</tr>
<tr>
<td>&lt;</td>
<td>&lt;</td>
</tr>
<tr>
<td>&gt;</td>
<td>&gt;</td>
</tr>
<tr>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>'</td>
<td>'</td>
</tr>
</tbody>
</table>

For example, the company name Buy & Sell Ltd. is expressed as follows: Buy &amp; Sell Ltd.

7.4 Notification of numerical values using a Finvoice message

The following definitions of decimal positions are used for different types of numeric elements:
- In EPI data, money values should always be entered with two decimal positions so that a payment proposal can be generated from the e-invoice in the Web bank.
- Amounts: if decimals are used, the numerical value may contain 2 to 5 decimals.
- Percentages are entered with 1 to 3 decimal positions.
- Exchange rates are entered with 6 decimal positions.

A comma (,) is always used as the decimal character. Note also that there are no leading zeros in numeric elements.

The integer part of the Amount must contain at least one digit. A decimal comma is mandatory and is included in the maximum length.
8 Recommendations for the use of Finvoice messages

The data content of Finvoice messages has been defined so that the message may be used in as many situations as possible. For this reason, many data items exist at both the general level and the row level. Even though the objective is that the message can be automatically processed in the recipient's systems, the data content is defined so that the data required for manual processing (such as addresses, contact persons, and footer information) is also available.

8.1 Use at the general level (invoice level) and row level

The message contains, for example, a DeliveryDetails field at the invoice level and the same information for each row. For example, an invoicing period may be represented at the invoice level in the StartDate and EndDate fields of DeliveryDetails, and the invoice rows may contain information related to the invoice in a Freetext field, or the invoicing period can be presented on a row-specific basis.

Row-specific invoice processing is recommended.

8.2 Using a Subtotal on the Rows

SubRow can be used for calculating row summaries, such as subtotals. The subtotal can be used to group the invoice rows by departments, product groups or orders, for example.

8.3 Using Posting Proposals and Automating Posting

The posting of an electronic invoice refers to a ready-made posting proposal on the e-invoice intended for the buyer’s financial accounting. The buyer can use the posting proposal to prepare its own accounting records.

Posting proposals are not mandatory for Finvoice messages, but the seller and buyer can agree on the use of posting data. The use of posting data also enables the automation of the buyer's accounting with regard to purchase transactions.

The objective of e-invoice posting proposals is to enable a simple and functional model for the automatic posting of purchase invoices and payment transactions. The accounting of a particular company may require different or more versatile entry procedures, which may be facilitated by constructing company-specific customised entry procedures by means of the data obtained from e-invoices. These modifications must be performed in the buyer’s accounting, as they would otherwise make the posting management for electronic invoices too complex.

Finvoice allows the use of posting proposals specific to the invoice as well as proposals specific to the row. A row-specific posting proposal allows the same invoice to contain invoicing related to both expenses and trade in goods.

In order to implement posting, the seller must know when creating the invoice whether the goods are bought for resale or use by the buyer. This information should be added to the buyer’s basic information.

A posting proposal can be created in accordance with the basic list of accounts, in which case data is forwarded at the invoice level in the ShortProposedAccountIdentifier and NormalProposedAccountIdentifier fields. A posting proposal that is not based on the basic list of accounts is placed in the Dimension or ProposedAccountText element.

A posting proposal can also be created at the invoice row level, in which case the RowShortProposedAccountIdentifier and RowNormalProposedAccountIdentifier fields are used.
RowAccountDimensionText and RowProposedAccountText are intended for forwarding mutually agreed posting and cost centre information.

Sellers can add their own posting data to the SellerAccountText element of the invoice. This data is intended for the seller's own accounting. If the seller delivers an invoice copy to the accounting firm, for example, postings related to the invoice can be completed in the seller's system or when an invoice is created.

### 8.4 Grounds for Invoices Exempt from VAT

The grounds for tax exemption shall be indicated in the VatFreeText or RowFreeText element and VatCode value. The VatCode value will be visualised with style sheet.

If the invoice sender or the invoice subject causes a different tax treatment, the tax information can be coded in the invoice or invoice row level. Tax codes are agreed in cooperation with the tax authorities.

<table>
<thead>
<tr>
<th>VAT code</th>
<th>Finnish</th>
<th>English</th>
<th>Swedish</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB</td>
<td>Marginaalivero</td>
<td>Exempt for resale</td>
<td>Marginalskatt</td>
</tr>
<tr>
<td>AE</td>
<td>Käännetty ALV</td>
<td>VAT Reverse Charge</td>
<td>Omvänd Moms</td>
</tr>
<tr>
<td>E</td>
<td>Yhteisömyynti</td>
<td>Exempt from tax</td>
<td>gemenskapsförsäljning</td>
</tr>
<tr>
<td>G</td>
<td>Veroton myynti ulkomaille (kolmanneet maat)</td>
<td>Free export item, tax not charged</td>
<td>Skattefri försäljning till utlandet (tredje land)</td>
</tr>
<tr>
<td>O</td>
<td>Veroton palvelu</td>
<td>Services outside scope of tax</td>
<td>Skattefri tjänst</td>
</tr>
<tr>
<td>S</td>
<td>Normaali veroprosentti</td>
<td>Standard rate</td>
<td>Normal skatteprocent</td>
</tr>
<tr>
<td>Z</td>
<td>Veroton tuote</td>
<td>Zero rated goods</td>
<td>Skattefri produkt</td>
</tr>
<tr>
<td>ZEG</td>
<td>Vero tavaraostoista muista EU-maista</td>
<td>Tax charged from goods bought from other EU countries</td>
<td>Skatt på köp av varor från andra EU-länder</td>
</tr>
<tr>
<td>ZES</td>
<td>Vero palvelustoista muista EU-maista</td>
<td>Tax charged from services bought from other EU countries</td>
<td>Skatt på köp av tjänster från andra EU-länder</td>
</tr>
</tbody>
</table>

### 9 The use of Data Elements

This section only lists specifications associated with the use of certain elements.

All data elements and their length, occurrence and usage are described in the data list within the application guidelines.

#### 9.1 MessageTransmissionDetails

MessageTransmissionDetails contains the same information as the SOAP frame, which is still mandatory in the Finvoice forwarding service.

The MessageTransmissionDetails aggregate is still not used in the Finvoice forwarding service.
9.2 SellerPartyDetails

Contains the seller's information, some of which is mandatory. The seller's address field (SellerStreetName) is used to add either a street or visiting address. If the seller only has a post office box address, this address is to be added to the SellerStreetName field and the SellerPostOfficeBoxIdentifier field is to be left blank.

The SellerOfficialPostalAddressDetails aggregate is used, for example, to add the official address of the parent company if it is different from the information provided in SellerPostalAddressDetails.

SellerPartyIdentifierUrlText can be used to add a link to the register of the National Board of Patents and Registration of Finland, where the business ID of a company can be checked. (www.ytj.fi)

9.3 SellerOrganisationUnitNumber

The party’s organisation unit, which is an SFS standard-compliant EDI identifier. The data can be used in the buyer’s system to identify the seller, for example. A complete identifier of 17 characters is recommended.

An SFS standard-compliant EDI identifier has the following format:

00371234567800001
- 0037 Country code for Finland
- 12345678 Business ID without hyphen, eight characters
- 00001 Optional specifier for organisation unit

9.3.1 SellerInformationDetails

General contact information about the seller may be updated in the register of sellers. Recommended for use on an invoice-specific basis only when invoices are printed exclusively as hard copies.

9.4 InvoiceRecipientPartyDetails

The Recipient data group is used when the message recipient is not the buyer but, for example, an accounting firm or other party acting on the buyer's behalf.

The InvoiceRecipientSellerOrganisationName element can be repeated several times. The elements are used to identify names and units associated with the same organisation.

9.4.1 InvoiceRecipientOrganisationUnitNumber

The party’s organisation unit, which is an SFS standard-compliant EDI identifier. A complete identifier of 17 characters is recommended.

An SFS standard-compliant EDI identifier has the following format:

00371234567800001
- 0037 Country code for Finland
- 12345678 Business ID without hyphen
- 00001 Optional specifier for organisation unit

9.5 BuyerPartyDetails

The buyer's VAT number (VatNumber) must be included in the BuyerOrganisationTaxCode element if the buyer is liable to pay tax on the basis of a reverse charge procedure or in the case of intra-
Community supply. Furthermore, the grounds for any tax exemption shall be indicated in VatFreeText. RowFreeText is used at the row level.

The BuyerSellerOrganisationName element can be repeated several times. The elements are used to identify names and units associated with the same organisation.

9.5.1 BuyerOrganisationUnitNumber

The party’s organisation unit, which is an SFS standard-compliant EDI identifier. A complete identifier of 17 characters is recommended.

An SFS standard-compliant EDI identifier has the following format:

00371234567800001
- 0037 Country code for Finland
- 12345678 Business ID without hyphen
- 00001 Optional specifier for organisation unit

9.6 InvoiceRecipientLanguageCode

The InvoiceRecipientLanguageCode field is used to enter the recipient's language code that can be used, for example, to present or print invoice header information according to the recipient's language code.

In the consumer e-invoice, the language depends on the language code specified in the recipient's Web bank or Web payment service.

9.7 DeliveryPartyDetails

Delivery party details are used when the goods have been delivered to a party other than the buyer.

The DeliveryOrganisationName element can be repeated several times. The elements are used to identify names and units associated with the same organisation.

9.7.1 DeliveryOrganisationUnitNumber

The party’s organisation unit, which is an SFS standard-compliant EDI identifier. A complete identifier of 17 characters is recommended.

An SFS standard-compliant EDI identifier has the following format:

00371234567800001
- 0037 Country code for Finland
- 12345678 Business ID without hyphen
- 00001 Optional specifier for organisation unit

9.7.2 DeliveryDetails

Details regarding delivery. If the delivery is related to a period, for example, power for a specific period, the delivery is indicated as a start and end date.

DeliveryDetails can be used to forward identification data related to the delivery, such as the delivery method, waybill details, customs clearance reference, the name of the deliverer, manufacturer, the place of unloading, the identification data related to transportation, and delivery size information. The data can be presented at the invoice level and row level.
9.8 ShipmentPartyDetails

The ShipmentPartyDetails aggregate specifies the shipping agent's contact information.

The PackageDetails aggregate specifies information related to the package.

9.9 AnyPartyDetails

This element can be used to specify a party that has no element of its own in Finvoice. The AnyPartyText element specifies a header and a code that corresponds to the header for a party. This code is printed in the layout of the invoice.

AnyParty can be specified at the invoice level or row level. The AnyParty aggregate can be repeated.

Each sector can define how this element is used.

9.10 Factoring

The information required by the financing company is forwarded in the FactoringAgreementDetails element. The sender sends a copy of the original invoice to the financing company.

The FactoringFreeText element is used to enter the assignment clause specified by the financing company. For more detailed information, refer to the sector-specific instructions for financing companies at www.finvoice.info.

9.11 RowOverDuePaymentDetails

The RowCollectionDate element is used to enter the number of collection times.

9.12 InvoiceDetails

Payment terms are used when the seller has calculated a deduction or delay in the invoice. The account posting details should include at least account posting in accordance with the basic list of accounts.

The code INV01 is used when sending invoices between companies and sending e-invoices to consumers.

Invoice Type Codes and Texts:

<table>
<thead>
<tr>
<th>Invoice TypeCode</th>
<th>InvoiceTypeText</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQ01</td>
<td>REQUEST FOR QUOTATION</td>
<td>Request for Quotation</td>
</tr>
<tr>
<td>QUO01</td>
<td>QUOTATION</td>
<td>Quotation</td>
</tr>
<tr>
<td>ORD01</td>
<td>ORDER</td>
<td>Order</td>
</tr>
<tr>
<td>ORC</td>
<td>ORDER CONFIRMATION</td>
<td>Order Confirmation</td>
</tr>
<tr>
<td>DEV01</td>
<td>DELIVERY NOTE</td>
<td>Delivery Note, e.g., a dispatch note</td>
</tr>
<tr>
<td>INV01</td>
<td>INVOICE</td>
<td>Commercial Invoice, e-invoice</td>
</tr>
<tr>
<td>INV02</td>
<td>CREDIT NOTE</td>
<td>Credit Note. See also Notes below</td>
</tr>
<tr>
<td>INV03</td>
<td>INTEREST NOTE</td>
<td>Interest note refers to an invoice that is used to charge interest only. See RowOverdueDetails.</td>
</tr>
</tbody>
</table>
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.
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 PaymentStatus 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.
9.20 SubInvoiceRow

The SubInvoiceRow aggregate is intended for presenting summary rows generated from invoice rows. No summary invoices are generated from invoices transmitted as Finvoice messages. SubInvoiceRow can be used to facilitate the invoice review process in connection with invoice visualisation.

The SubRowAmount element holds the total of the preceding RowAmount elements. In the message layout (XSL), the rows are printed in bold.

The information in the InvoiceRow aggregate is used for calculating the total amounts and VAT summaries for the invoices. The information in the SubRow elements is not used for calculating the invoice total, because this might cause rounding errors and does not support automatic processing.

SubInvoiceRow is a sub-aggregate of InvoiceRow. In this case, InvoiceRow only includes SubInvoiceRow.

The simplest way to use SubInvoiceRow is to enter text describing the summary in the SubArticleName element and the total number of the preceding rows in SubRowAmount.

SubRow can be used to provide a reference for matching the SubInvoiceRow with designated InvoiceRow aggregates.

There can be more than one subtotal row per invoice row.

The invoice cannot contain SubInvoiceRows only because the calculation of the invoice total, for example, is based on InvoiceRow.

9.21 SubRowDeliveryDetails

The elements specify the delivery-related information for each row. The RowQuotationIdentifier element can be used to provide a reference to a quotation.

9.22 SpecificationDetails

Sector-specific specification details may be presented inside this aggregate, for example, the specification details of an electricity invoice or a telephone invoice, etc.

Specification details should be presented using Courier or some other fixed-width font. Each row should only contain 80 characters. When automatic word wrap is enabled, the use of Enter for line breaks is not allowed.

The specifications can be presented in a formatted way in the SpecificationFreeText element, which allows the information to be presented to the payer using the standard XSL of the Federation of Finnish Financial Services.

Example:

```
<SpecificationDetails>
<SpecificationFreeText>INVOICE DETAILED STATEMENT: </SpecificationFreeText>
<SpecificationFreeText>-------------------------------------------------------</SpecificationFreeText>
<SpecificationFreeText>1. column’s information 2.information 10,00 </SpecificationFreeText>
<SpecificationFreeText>2. row 2. row 1 00,00 </SpecificationFreeText>
<SpecificationFreeText>3. row 3/2 1,00 </SpecificationFreeText>
```
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.
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
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:

例：

\[<\text{InvoiceUrlText}>12345678+102030FK405060708091011121314156</\text{InvoiceUrlText}>\]

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.
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.
11.2.1 Parts of the example and their descriptions

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.

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.
The From and To parties can use either identifiers agreed with an intermediator or mutually agreed identifiers. An identifier can be, for example, EDI, IBAN or a designated identifier issued by the invoice operator or Intermediator. If the customer uses an invoice operator, he should agree on the address to be used with his operator.

The data regarding the parties must be specified in the following order:
- Sender
- Intermediator (Sender)
- Receiver
- Intermediator (Receiver)

The identifiers of the various actors affect SOAP routing. SOAP will always go one step at a time towards the destination. eb:From and eb:To identify the original sender and receiver, but both parties may have an assistant in the intermediator role, who will receive the message first and then forward it to the final recipient (compare to the following figure).

The Finvoice forwarding service intermediator codes of the Service Providers in the Finvoice forwarding service:

<table>
<thead>
<tr>
<th>Intermediators</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OKOYFIHH</td>
<td>Osuuspankit (OP Banks) and Pohjola Bank</td>
</tr>
<tr>
<td>NDEAFIHH</td>
<td>Nordea Bank</td>
</tr>
<tr>
<td>DABAFIHH</td>
<td>Sampo Bank</td>
</tr>
<tr>
<td>HELSFIHH</td>
<td>Aktia, savings banks and local cooperative banks, Itella IPS</td>
</tr>
<tr>
<td>HANDFIHH</td>
<td>Handelsbanken</td>
</tr>
<tr>
<td>TAPIFI22</td>
<td>Tapiola Bank</td>
</tr>
<tr>
<td>AABAFL22</td>
<td>Bank of Aland</td>
</tr>
</tbody>
</table>

Sender and Receiver Information:

<table>
<thead>
<tr>
<th>From</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ov</td>
<td>Finnish EDI identifier, country code + Business ID + specifier</td>
</tr>
<tr>
<td>ly</td>
<td>0037+01234567+000000 e.g. 00370123456700000</td>
</tr>
<tr>
<td>IBAN</td>
<td>Business Identity Code (Business ID)</td>
</tr>
<tr>
<td>nn…</td>
<td>Account number in international format (IBAN)</td>
</tr>
<tr>
<td></td>
<td>An identifier agreed between the Service Provider (Intermediator) and the customer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ov</td>
<td>Finnish EDI identifier, country code + Business ID + specifier</td>
</tr>
<tr>
<td>ly</td>
<td>0037+01234567+000000 e.g. 00370123456700000</td>
</tr>
<tr>
<td>IBAN</td>
<td>Business Identity Code (Business ID)</td>
</tr>
<tr>
<td>nn…</td>
<td>Account number in international format (IBAN)</td>
</tr>
<tr>
<td></td>
<td>An identifier agreed between the Service Provider (Intermediator) and the customer</td>
</tr>
</tbody>
</table>
An Example of using the From and To Elements

X = Sender’s Service Provider
Y = Invoice recipient’s Service Provider

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.
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.

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:
<?xml version="1.0" encoding="ISO-8859-15"?>
<!DOCTYPE Finvoice SYSTEM "http://www.finvoice.info/yrityksen_verkkolasku/ladattavat/Tekniset_tiedostot/schemat/Finvoice.xsd">
<Finvoice Version="1.0" xmlns="http://www.finvoice.info/yrityksen_verkkolasku/ladattavat/Tekniset_tiedostot/schemat/Finvoice.xsd"> 
<braindation><Acknowledgement> 
<braindation><eb:From>
<braindation><eb:PartyId>0037123456678</eb:PartyId>
<braindation><eb:Role>Sender</eb:Role>
<braindation><eb:From>
<braindation><eb:PartyId>NDEAFIHH</eb:PartyId>
<braindation><eb:Role>Intermediator</eb:Role>
<braindation><eb:To>
<braindation><eb:PartyId>FI2757800750155448</eb:PartyId>
<braindation><eb:Role>Receiver</eb:Role>
<braindation><eb:To>
<braindation><eb:PartyId>OKOYFIHH</eb:PartyId>
<braindation><eb:Role>Intermediator</eb:Role>
<braindation><eb:To>
<braindation><eb:CPAId>yoursandmycpa</eb:CPAId>
<braindation><eb:ConversationId/>
<braindation><eb:Service>Routing</eb:Service>
<braindation><eb:Action>ProcessInvoice</eb:Action>
<braindation><eb:MessageData>
<braindation><eb:MessageId>20081228-010142</eb:MessageId>
<braindation><eb:Timestamp>2008-12-28T01:01:42+03:00</eb:Timestamp>
<braindation><eb:RefToMessageId>XS1027.LPTF82/268</eb:RefToMessageId>
<braindation><eb:MessageData>
<braindation><eb:MessageHeader>
<braindation><SOAP-ENV:Header>
<braindation><eb:MessageHeader>
<braindation><SOAP-ENV:Body>
<braindation><eb:Manifest eb:id="Manifest" eb:version="2.0">
<braindation><eb:Reference eb:id="Finvoice" xlink:href="XS1027.LPTF82/268">
<braindation><eb:Schema eb:location="http://www.finvoice.info/yrityksen_verkkolasku/ladattavat/Tekniset_tiedostot/schemat/Finvoice.xsd" eb:version="2.0"/>
<braindation><eb:Reference>
<braindation><eb:Manifest>
<braindation><SOAP-ENV:Body>
<braindation><SOAP-ENV:Envelope>
<?xml version="1.0" encoding="ISO-8859-15"?>
<!DOCTYPE Finvoice SYSTEM "Finvoiceack.dtd">
<?xml-stylesheet type="text/xsl" href="Finvoiceack.xsl"?>
<Finvoiceack Version="1.0" xmlns="http://www.finvoice.info/yrityksen_verkkolasku/ladattavat/Tekniset_tiedostot/schemat/Finvoice.xsd" eb:version="2.0"/>
</Finvoiceack>
The field RefToMessageId specifies the message with which the acknowledgement is associated.

12.1.1 Parts of an Acknowledgement Message

The acknowledgement message contains a simple message inside a frame also used in invoices. The message specifies what has happened from the receiving application’s point of view. The SOAP frame directly indicates some error situations. These are listed in the SOAP specification. The DTD file for Acknowledgement Message can be found at www.finvoice.info.
The acknowledgement message frame includes the identification data of the original message (RefToMessageId), as well as the MessageId and Timestamp of the acknowledgement message.

The acknowledgement message includes the address information of the sender and receiver of the original invoice message, the MessageId and Timestamp of the original invoice message, as well as the reason for rejection in code and text formats. The original invoice frame must indicate a MessageId uniquely identifying the invoice. The MessageId comes with error feedback that can be matched with the original invoice.

**Reason Codes and Descriptions:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sanoma vastaanotettu jatkokäsittelyyn (Message received for further processing)</td>
</tr>
<tr>
<td>2</td>
<td>Vastaanottajaa ei löydy (Receiver not found)</td>
</tr>
<tr>
<td>3</td>
<td>Palvelusopimus puuttuu (Service agreement missing)</td>
</tr>
<tr>
<td>4</td>
<td>Intermediatoria ei löydy (Intermediator not found)</td>
</tr>
<tr>
<td>5</td>
<td>Sanoman Id ja aikaleima on jo käytetty (Message Id and time stamp already used)</td>
</tr>
<tr>
<td>6</td>
<td>Other error: detailed description of error</td>
</tr>
</tbody>
</table>

**12.1.2 Appearance of Acknowledgement Message in Browser (XSL)**

In order to open an acknowledgement message using an XSL file, the namespace references in the acknowledgement message must be used. The address information of the original message sender and receiver has been added to the layout.
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:

<table>
<thead>
<tr>
<th>Occurs</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mandatory, occurs once.</td>
</tr>
<tr>
<td>0..1</td>
<td>Not mandatory, but may occur only once.</td>
</tr>
<tr>
<td>1..n</td>
<td>Mandatory at least once. May occur several times.</td>
</tr>
<tr>
<td>0..n</td>
<td>Not mandatory, but may occur several times.</td>
</tr>
</tbody>
</table>

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 CCYMMDD.

The EpiCharge element has a ChargeOption attribute.

13.2 Finvoice Structure
13.3 InvoiceDetails Structure
13.4 InvoiceRow Structure
13.5 SubInvoiceRow Structure

```
SubInvoiceRow [ ]
| SubRowInvoiceNumber       |
| SubRowRawDataIdentifier   |
| SubRowDeliveryDate        |
| SubRowPriceDetail         |
```

13.6 Descriptions of data in the Data List

A separate excel table describing the data used in Finvoice is available at www.finvoice.info. The new elements added to the Finvoice version 1.3 are marked in red.