

IPOST XML

DESIGN GUIDE

LetterBundle v1x0 Schema

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This document gives information how to implement, deploy, maintain and use iPost service with XML format for standard implementation in Finland. The service is described in iPost Service description and iPost Technical specification documents.

Service: iPost

Country/market: FI

Posti Messaging reserves the right to change the Service features and this Design Guide. The latest versions of product documentation are available at Posti Messaging Customer Service Portal.

1 INTRODUCTION

This document describes the use of version v1x0 of iPost LetterBundle with iPost PDF and iPost EPL letters. LetterBundle XML follows the same schema in both services but, when the material is in EPL format, some of the elements and attributes are not available.

Additions to the new version offer better controllability of electronic channels such as letters transferred via OmaPosti. A letter can be complimented with metadata such as a person's identity number, which will unequivocally identify the recipient. In addition, the name of the sender company and the letter's heading can be entered in a range of language versions and the invoice data in structural format. iPost Invoice Design Instructions include example files which provide more detailed information.

1.1 General information

1.1.1 File name

The maximum length of the file name including file extension is 90 characters. Characters a-z, A-Z, 0-9 and -._ (dash, dot and underscore) are allowed. However, character sets “.-” and “-.” are prohibited. The limitation applies to all type of files (such as *.AFP, *.EPL, *.PDF, *.XML, *.ZIP) and filenames inside the ZIP file. File names must be less than 90 characters. The limitation applies to all type of files such as *.AFP, *.EPL, *.PDF, *.XML and *.ZIP

2 LETTERBUNDLE V1X0

2.1 V1x0 vs. v0x4

The v1x0 schema introduces new elements and removes some elements used in the older version. Particularly the new schema adds support for new virtual bank codes. We recommend the implementation of the new schema.

2.2 iPost EPL

The metadata is entered in specific locations in XML format. In EPL, additional EPLV rows will be entered around the XML section in the following manner:

EPLV-rows	Usage in EPL
EPLVBUNDLEV1x0-BEGIN	Begins file-specific metadata. Location directly after EPL1 row. Only one per EPL file allowed. If file-specific metadata is used, letter-specific metadata must be used for each letter.
EPLVBUNDLEV1x0-END	Ends file-specific metadata.
EPLVLETTERV1x0-BEGIN	Begins letter-specific metadata. Location directly after the row beginning with "1" following the EPLK row. Only one per letter allowed.
EPLVLETTERV1x0-END	Begins letter-specific metadata. Location directly after the row beginning with "1" following the EPLK row. Only one per letter allowed.

The character set used in iPost EPL XML is according to ISO8859-1. It is essential that the character sets of the entire file, both for EPL and metadata, shall be identical. IPost does not support character entities in the XML data.

Since the same data is given on the EPL1 and EPLK rows and the used XML schema is the same as in iPost PDF, the following elements and attributes are unnecessary in iPost EPL XML. The data contained in these elements or attributes will not be used in EPL data processing.

Element/Attribute	Usage in EPL
Bundle Common/ isTest attribute	Not used in EPL data processing. Instead, the Service Functions (16) field of row EPL1 is used
Std Bundle Processing element	Not used in EPL data processing. Corresponding data in the fields of row EPL1.
External File element	Not used in EPL data processing.
Letter Meta/Location element	Mandatory field according to the XML schema. This field is not used in the processing of EPL data. Use a fixed value <lb:Location startPage="1" pages="-1"/>
Letter Meta/Std Letter Processing element	Not used in EPL data processing. Corresponding values described on row EPLK.

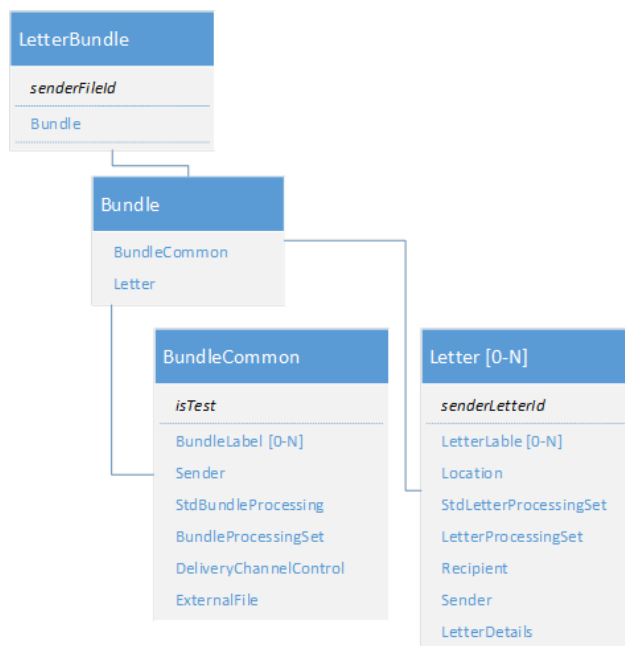
3 ELEMENT SPECIFIC DATA

3.1 Over view of Letter Bundle XML schema

The Letter Bundle contains meta data about letters in the batch.

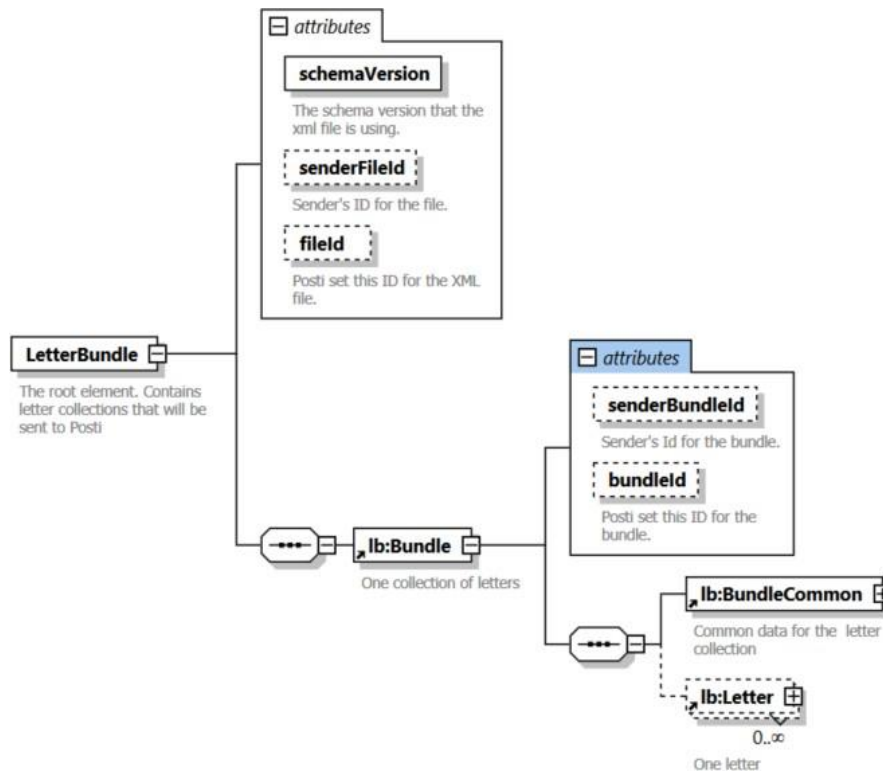
The BundleCommon structure contains the common data for the whole batch.

The Letter structure contains meta data for the letter.



3.2 lb:LetterBundle element

The Letter Bundle element contains single Bundle element.



Attributes/elements	Description	Control Data
xsi:schemaLocation	Mandatory	"urn:itella.com:/schema/ipost/letterbundle/v1x0 LetterBundle_V1x0.xsd"
xmlns:xsi	Mandatory	"http://www.w3.org/2001/XMLSchema-instance"
xmlns:lb	Mandatory. The "lb" namespace can also be something else. If the "lb" namespace differs from the one mentioned here, the namespace of the elements mentioned in this document must correspond to it.	"urn:itella.com:/schema/ipost/letterbundle/v1x0"
schemaVersion	XML version. Mandatory.	"v1x0"
senderFileId	Sender's ID for the file.	Customer's unique ID for the batch, not mandatory.

3.2.1 lb:Bundle element

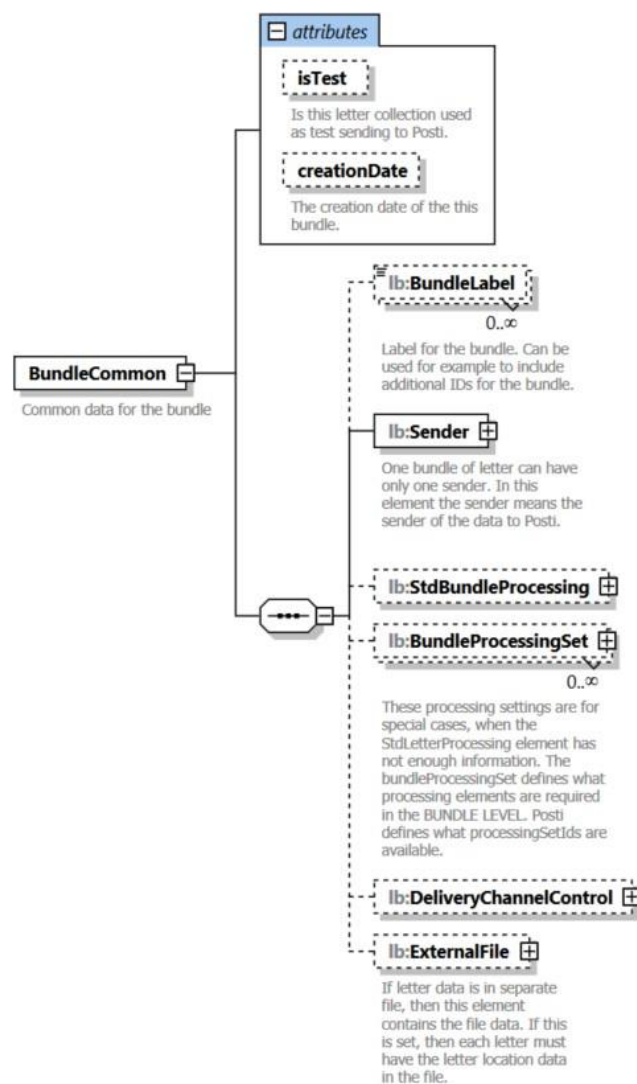
The Bundle element is mandatory.

Attributes/elements	Description	Control Data
SenderBundle ID	Customer's ID for the material	Customer's unique ID for the batch, not mandatory.

3.2.1.1 lb:BundleCommon element

The BundleCommon element contains common data to to the whole batch.

The BundleCommon element is mandatory.



Attributes/elements	Description	Control Data
isTest	Defines whether the material is a test or part of production	"true" = test material "false" = production material
CreationDate	Optional. Creation date of the batch.	Format: http://www.w3.org/TR/xmlschema-2/#dateTime
lb:BundleLabel	Optional. Sender own labels for the batch.	Sender can give multiple own labels for the bundle. The label can be for example any ID used for the Bundle in the processing before the iPost service.

3.2.1.2 Ib:Sender element

The Sender element is mandatory.

Attributes/elements	Description	Control Data
ovtID	Batch sender's party identification number (OVT ID) (SFS 5748). The OVT ID can be generate from the Finnish Y- tunnus.	
Contact	Mandatory. It is important to give this information. Sender's contact data, used in case of error notifications. The text could be "email, phone"	Free-form text field for contact details. Mandatory
Company Name	Name of file's sender company. Used in case of error notifications.	Sender company's name.
Contact Person	Contact person. Used in case of error notifications.	Name of contact person / service.
Phone Number	Contact person's telephone number. Used in case of error notifications.	Telephone number with area codes.
email	Contact person's e-mail address Used in case of error notifications.	E-mail contact address.
Ib:SenderAddress/Ib:Eu1	Company's contact details.	Sender company, address, postal code, post office and country code.

3.2.1.3 Ib:StdBundleProcessing

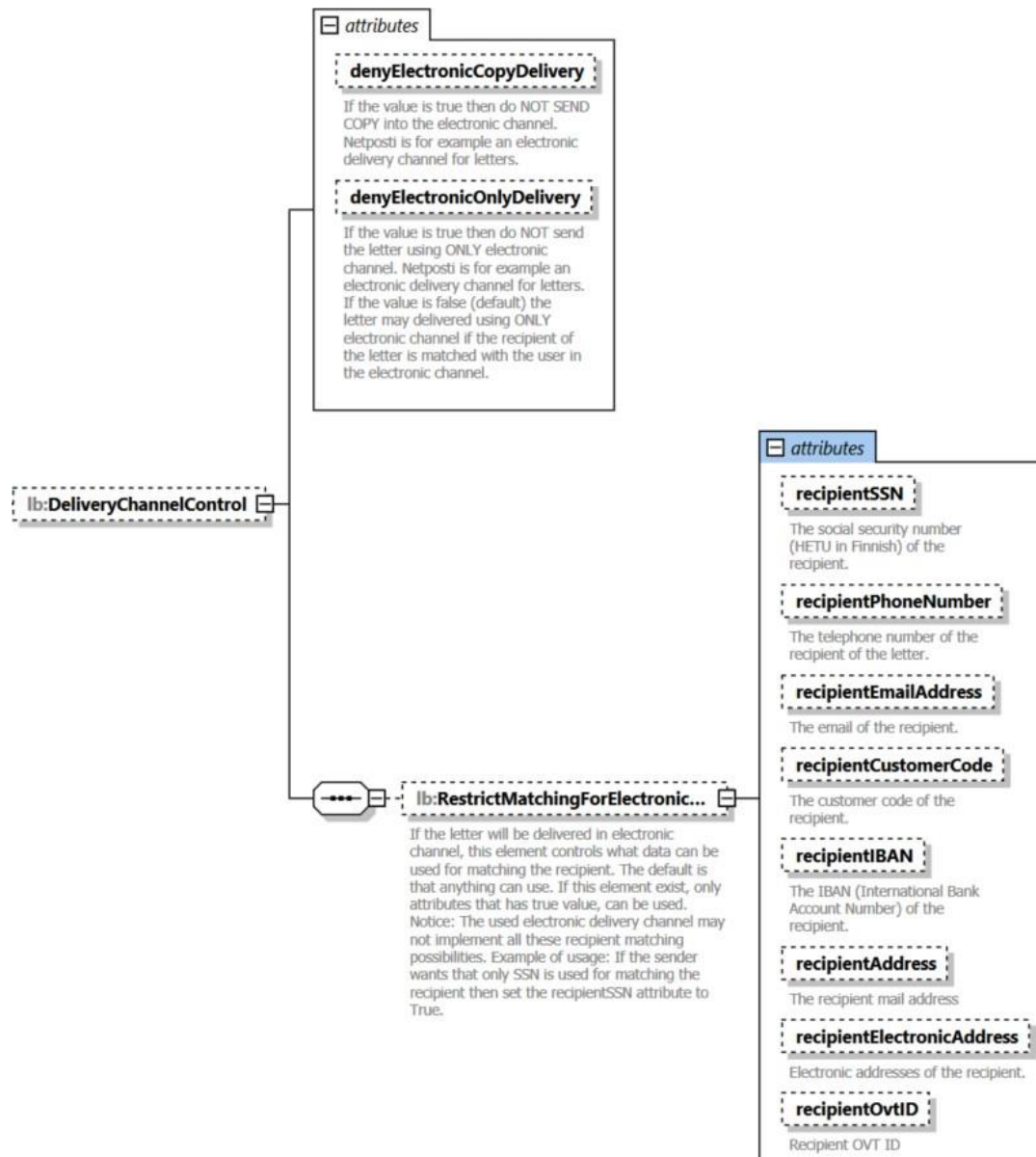
The StdBundleProcessing element contains same data fields that the EPL1 line contains in the EPL data. In the iPost StdBundleProcessing data is read in the EPL case from the EPL1 line.

Attributes/elements	Description	Control Data
customerID	Customer ID	Mandatory. The customer receives this when it signs the iPost agreement with Posti Messaging or Finland Post, "Pnnnnn" in the example.
password	Password	Mandatory. Issued to the person liable for the customer ID. Changed upon request. "mmmm" in the example.
serviceFunction	Service actions	Mandatory. 0 = normal production material

electronicArchiving	Electronic Archiving	Mandatory. T = printing, no archiving B = both printing and eArchiving *) C = eArchiving only, no printing *) B and C are not in use when sending letters in PDF format *) Requires a service agreement
letterClass	Letter class	Mandatory. 1 = Priority 2 = Economy, 3 = Registered letter, 4 = Letter with Advice of delivery, 5 = Economy plus 6=iPost Direct Mail (Asiakassuora)
envelope	Envelope	Mandatory. S = iPost letter standard envelope
Paper	Paper	Mandatory 0 = standard paper for black-and-white printing W = standard paper for color printing A = premium paper for black-and-white printing* B = premium paper for color printing* Letter classes 3 and 4 (registered and advice of delivery) case: Value must be W. It is always color printing due to postal delivery information printed in envelope window area.
departmentClassification	Department classification	Optional. "false" = department-specific classification not in use "true" = department-specific classification in use. The default is department classification is not used.
archivingApplicationID	Application ID	Optional. Length 2 characters (A-Z, 0-9)
isDuplex="false"	Sides	Optional. "false" = 1-sided printing (simplex) "true" = 2-sided printing (duplex). 1-sided printing is the default. This value is used in the paper printing.

* The maximum number of sheets per envelope is 6.

3.2.1.4 Ib:DeliveryChannelControl



Attributes/elements	Description	Control Data
denyElectronicCopyDelivery	Controls the creation of letter copies in electronic channels such as OmaPosti.	<p>“false” = default, electronic copies formed of physical letter.</p> <p>“true” = no electronic copies formed of letters.</p>

denyElectronicOnlyDelivery	Controls the creation of electronic letters in electronic channels such as OmaPosti.	“false” = default. If the recipient wishes to receive the letter in electronic format only, then no physical letter is sent. “true” = letters will not be delivered in electronic-only format.
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3.2.1.5 Ib:RestrictMatchingForElectronicDelivery

This element controls recipient identification for electronic delivery. If this element has not been defined, **all matching methods are used by default**.

If the attribute’s value is false, this will not restrict the recipient identification in the electronic delivery. If the value of one or several attributes is “true” only these factors, which have true value, s will be used in recipient identification when performing delivery via electronic channels.

For example, this element can be used to restrict recipient identification in the electronic delivery to the use of the personal identity number (SSN) only. Set the recipientSSN value to true and rest of values to false. The false value is the default.

Attributes/elements	Description	Control Data
recipientSSN	Recipient’s personal identity number (HETU in Finland).	“true” or “false”
recipientAddress	Recipient’s postal address	“true” or “false”. Recipient address is mandatory in letter specific recipient data. Recipient address controls whether recipient’s address data is used in electronic delivery, if other limitations exist (e.g. recipientSSN is set as “true”).
recipientEmailAddress	Recipient’s e-mail address	“true” or “false”
recipientCustomerCode	Recipient’s customer code	“true” or “false”
recipientIBAN	Recipient’s IBAN bank code	“true” or “false”
recipientElectronicAddress	Recipient’s electronic channel address	“true” or “false”
recipientOvtID	Party identification number (OVT ID) of recipient company.	“true” or “false”

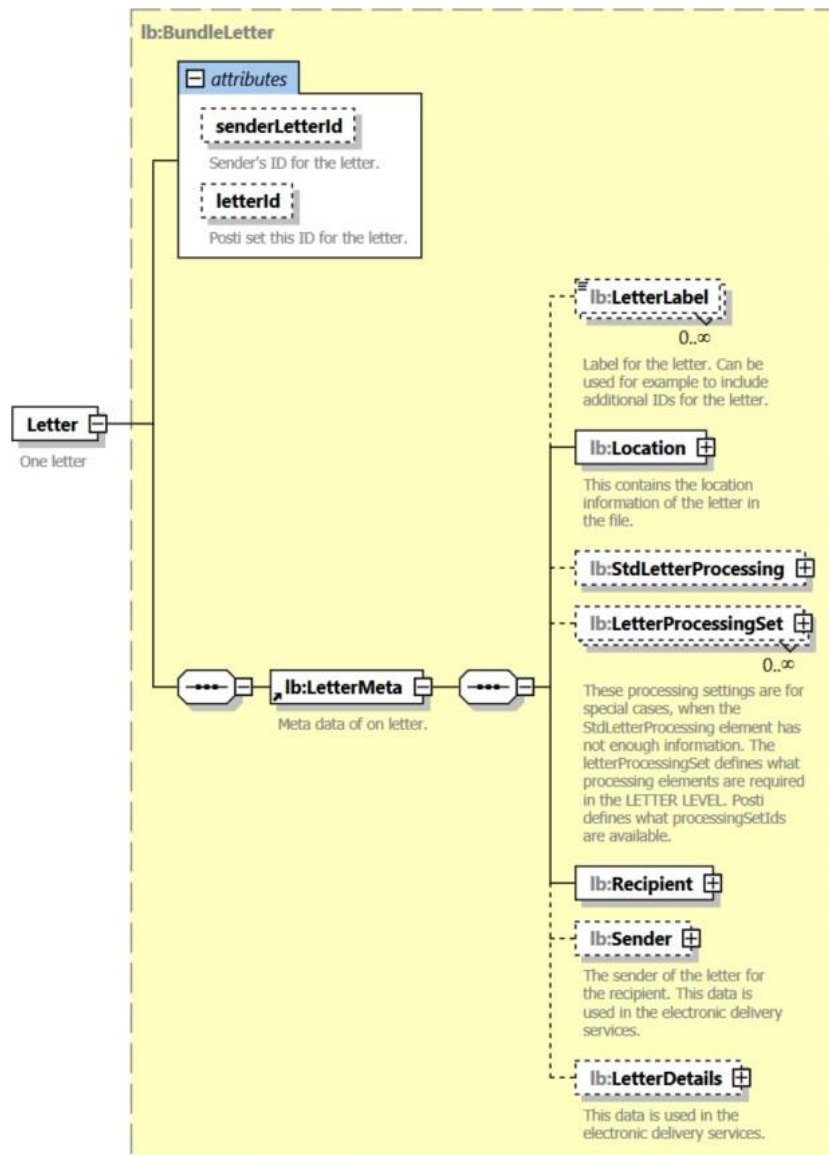
3.2.1.6 ExternalFile

If letter data is in separate file, then this element contains the file data. If this is set, then each letter must have the letter location data in the file.

Attributes/elements	Description	Control Data
senderFileId	Sender's ID for the file.	
filename	Name of PDF file	File name that contains the PDF letters. Mandatory for PDF letters. The name of the file without the path. The LetterBundle xml-file and the data file must be located in the same directory. File name must have less than 90 characters.
Checksum/lb:type	Not used.	
Checksum/lb:value	Not used.	

3.2.1.7 lb:Letter

The Letter element in the XML metadata of iPost EPL file must include the following attributes: xsi:schemaLocation, xmlns:xsi and xmlns:lb. The values are defined in section 3.1 lb:LetterBundle element on page 5.



Attributes/elements	Description	Control Data
senderLetterId="LetterID1"	Sender's ID for the letter. This senderLetterId is the correlation data for the sender. It is highly recommended that letters have this value. Make sure it does not contain any sensitive data. Sender can identify and match the individual letters from reports and tracking service with this information.	Optional, but highly recommended

3.2.1.7.1 Ib:LetterMeta

Attributes/elements	Description	Control Data
LetterLabel	Label for the letter. Can be used for example to include additional ID's for the letter.	Optional.

3.2.1.7.1.1 Ib:Location

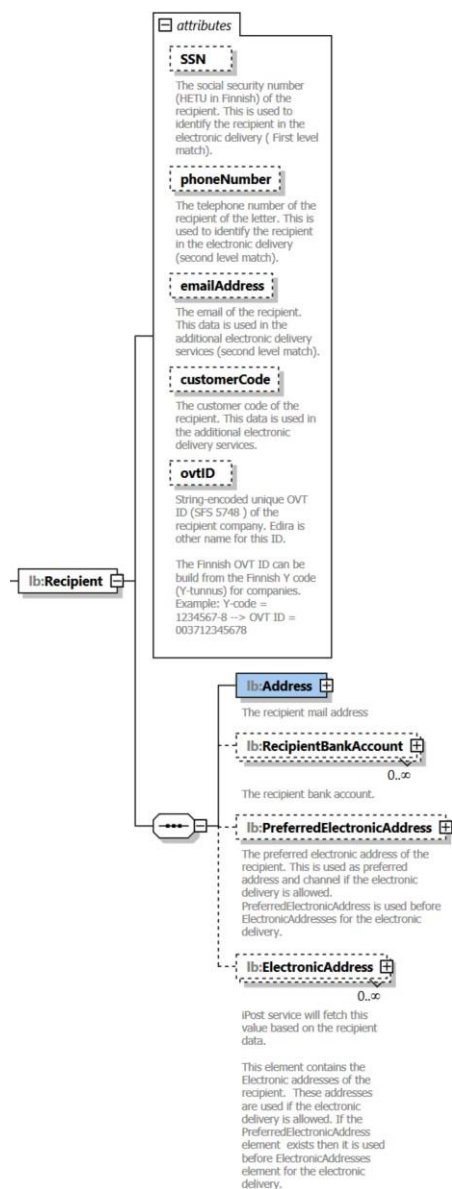
Attributes/elements	Description	Control Data
startPage	Letter's start page in the PDF file.	Mandatory
pages	Number of pages in the letter.	Mandatory

3.2.1.7.1.2 Ib:StdLetterProcessing

Attributes/elements	Description	Control Data
departmentClassificationCode	Department code (enables itemised billing). For these to be visible on the invoice, the department classification code "departmentClassification" must be "true".	Optional, 1–15 characters long string, Characters a-z, A-Z, 0-9 and white space are allowed.

3.2.1.7.1.3 Ib:Recipient

Recipient's data is used in letter delivery optimization. Recipient's physical address data is mandatory.



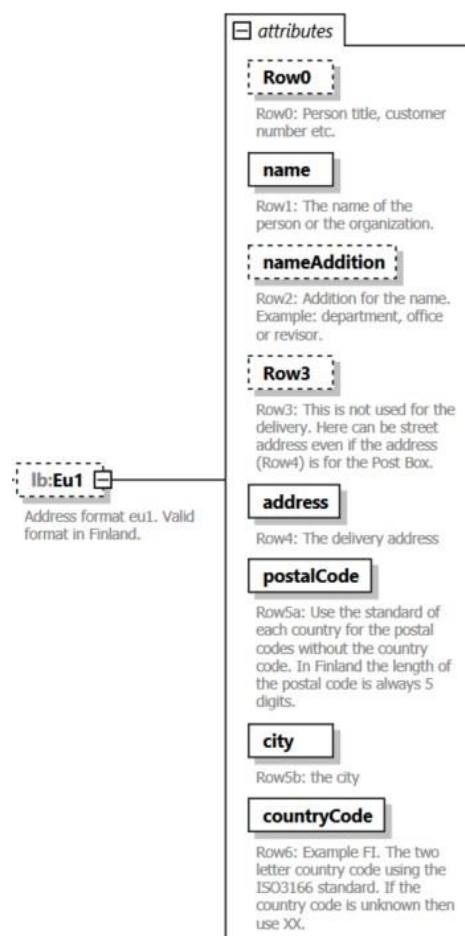
Attributes/elements	Description	Control Data
SSN	Recipient's personal identity number. Used for identifying the person in electronic channels (primary identification). In Finland this is the HETU code.	Optional. Recipient's personal identity number

phoneNumber	Recipient's phone number. Used for identifying the person in electronic channels. Letter class 3 and 4 (registered and advice of delivery) case: The recipient phone number will be use to send the notification to the recipient to pick up the registered or advice of delivery letter.	Optional. Fixed line or mobile phone number.
emailAddress	Recipient's e-mail address. Used for identifying the person in electronic channels. Letter class 3 and 4 (registered and advice of delivery) case: The recipient email will be use to send the notification to the recipient to pick up the registered or advice of delivery letter.	Optional.
customerCode	Recipient's customer code. Used for identifying the person in electronic channels.	Optional.
ovtID	Recipient company's identification number (OVT ID) (SFS 5748). The OVT ID of Finnish company is created by adding 0037 to the beginning of the business ID (Y-tunnus) and removing the hyphen. For example: Business ID = 1234567-8 → OVT ID = 003712345678	Optional.
lb: Address/lb:Eu1	Letter class 3 and 4 (registered and advice of delivery) case: This recipient address will be written into the first page of the letter in envelope window area by iPost.	Mandatory. Recipient's name, address, postal code, post office and country code.
lb:RecipientBankAccount	Recipient Bank Account	Optional. Bank account type that supports BBAN (old) and BIC+IBAN (new) . BIC+IBAN recommended
lb: RecipientBankAccount /lb:BIC	The Bank Identifier Code (BIC) of the payee's intermediary.	
lb: RecipientBankAccount /lb:IBAN	The International Bank Account Number (IBAN)	
lb: RecipientBankAccount /lb:BBAN	The Basic Bank Account Number (BBAN)	This the old format for bank account. It is strongly recommended to use BIC + IBAN instead of BBAN

lb: RecipientBankAccount /lb:CountryCode	Country code	he two letter country code using the ISO3166 standard to use with BBAN.
lb: PreferredElectronicAddress /channelName	Preferred electronic channel	Optional. "None" = not selected "NetPost" = OmaPosti
lb: PreferredElectronicAddress /address	Recipient's preferred electronic channel address.	Optional.
lb:ElectronicAddress /channelName	Name of electronic channel. If the PreferredElectronicAddress element is found, the preferred channel is used instead of this.	Optional. "None" = not selected "NetPost" = OmaPosti

3.2.1.7.1.4 EU1 address

The EU1 address structure is used in the recipient, sender (bundle and letter), PayeeAddress (invoice data). Mandatory attributes are name, address, postalCode, city and countryCode.



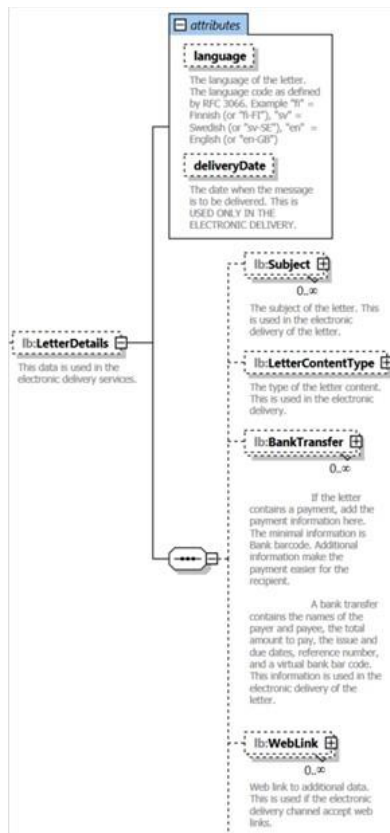
3.2.1.7.1.5 lb:Sender

The sender data is optional, but sender address is mandatory with letter classes 3 and 4 (registered letters and advice of delivery letters).

Attributes/elements	Description	Control Data
ovtID	Sender's party identification number (OVT ID). If the sender is an operator, this section will include the OVT ID of that sender which is known to the recipient, not the operator's OVT ID.	Optional. OVT ID in accordance with SFS 5748 NOTE: If OVT id is used here then it is mandatory to use sender's name in lb:name/lb:text
phoneNumber	Sender's phone number for the recipient	Optional. Fixed line or mobile phone number.
email	Sender's e-mail address for the recipient	Optional.
webSite	Sender's website address for the recipient.	Optional.
lb:name/language	Language code for the sender's name.	Optional. Language code according to RFC 3066, for example fi, fi-FI, sv-SE, en-GB. FIN or fin is not a valid language code.
lb:name/text	Sender's name for the recipient in accordance with the language attribute's language. If the language attribute is empty, the default language is used.	Optional. NOTE: This is mandatory if OVT id is used in lb:ovtID
lb: Address/lb:Eu1	Sender address information. Letter class 3 and 4 (registered and advice of delivery) case: This sender address will be written into the first page of the letter in envelope window area by iPost.	Optional/Mandatory. Sender name, address, postal code, post office and country code

3.2.1.7.1.6 lb:LetterDetails

The data in the LetterDetails element is used in electronic delivery to describe the content of the letter, such as letter type and language, and to ease the payment of an electronic invoice e.g. by means of a bank barcode. The sender helps electronic receiver by filling these data fields.



Attributes/elements	Description	Control Data
language	Language of the letter	Language code according to RFC 3066, e.g. fi, fi-FI, sv- SE, en-GB. FIN or fin are not valid language codes
deliveryDate	Language of the letter	Format: http://www.w3.org/TR/xmlschema-2/#dateTime
lb:Subject/language	Language code for the letter's heading.	Language code according to RFC 3066, e.g. fi, fi-FI, sv- SE, en-GB. FIN or fin are not valid language codes
lb:Subject/text	Letter's heading in accordance with the language attribute's language. If the language attribute is empty, the default language is used.	

lb:LetterContentType/invoice lb:LetterContentType/wageSlip lb:LetterContentType/arrivalNotice lb:LetterContentType/healthCare lb:LetterContentType/reminder lb:LetterContentType/announcement lb:LetterContentType/archivelItem lb:LetterContentType/lauthorityMessage	Letter type. Several attributes can have values simultaneously. This information is given for letter for example in the OmaPosti delivery.	"true" or "false"
lb:BankTransfer/bankBarcode	Bank barcode	Includes 54 characters. See Federation of Finnish Financial Services (www.fkl.fi).
lb:BankTransfer/BankBarcodeCountry	Bank barcode country code	If the bank barcode definition or usage is country specific, include here the country code. The two letter country code using the ISO3166 standard.
lb: BankTransfer/referenceNumber	Invoice reference number	
lb: BankTransfer/dueDate	Invoice due date	YYYY-MM-DD (ISO 8061)
lb:BankTransfer/issueDate	Invoice date	YYYY-MM-DD (ISO 8061)
lb: BankTransfer/totalAmount	Invoice total sum	
lb: BankTransfer/totalAmountString	Invoice total sum in text	In direct debit "*****"
lb:BankTransfer/currency	Used currency	Currency code in accordance with ISO 4217. Default is EUR.
lb: BankTransfer/type	Bank transfer type	"NONE", "BANKGIRO", "DIRECTDEBIT"
lb: BankTransfer/pageInLetter	Bank transfer page number in the letter. The letter's first page number is 1.	
lb:BankTransfer/Payer	Payer's name	
lb: BankTransfer/Payee	Payment receiver's name	

lb:BankTransfer/lb:PayeeBankAccount	Payee's Bank Account	Bank account type that supports BBAN and BIC+IBAN. BIC+IBAN recommended.
lb:BankTransfer/lb:PayeeBankAccount/ lb:BIC	The Bank Identifier Code (BIC) of the payee's intermediary.	
lb:BankTransfer/lb:PayeeBankAccount/ lb:IBAN	The International Bank Account Number (IBAN)	
lb:BankTransfer/lb:PayeeBankAccount/ lb:BBAN	The Basic Bank Account Number (BBAN)	This the old format for bank account. It is strongly recommended to use BIC + IBAN instead of BBAN.
lb:BankTransfer/lb:PayeeBankAccount/ lb:CountryCode	Country code	The two letter country code using the ISO3166 standard to use with BBAN.
lb:BankTransfer/lb:PayeeAddress/lb :Eu1	Payee's contact details.	Payee's company, address, postal code, post office and country code.

4 BANK TRANSFER DATA IN OMAPOSTI

OmaPosti does not support all possible LetterBundle data variations. Limitations and the way they are handled in the iPost service are listed below. Usually it is safest to include everything in the LetterBundle XML.

The payment data in the OmaPosti delivery contains the bank barcode and payment details.

Element or Attribute (LetterBundle v1x0)	Limitations in the OmaPosti delivery.
/lb:LetterBundle/lb:Bundle/lb:Letter/lb:LetterMeta/ lb:LetterDetails /lb:BankTransfer	<ul style="list-style-type: none"> If the BankTransfer element contains total Amount and at least one PayeeBankAccount, bank barcode and the Payment details are included in the OmaPosti delivery. If either totalAmount or PayeeBankAccount is missing, only bank barcode is included.
/lb:LetterBundle/lb:Bundle/lb:Letter/lb:LetterMeta/ lb:LetterDetails /lb:BankTransfer/@bankBarcode	<ul style="list-style-type: none"> If attribute length is not 54 characters bank barcode number is not included in the OmaPosti delivery. If bank barcode contains other characters than numbers, it is not included in the OmaPosti delivery.
lb:LetterBundle/lb:Bundle/lb:Letter/lb:LetterMeta/ lb:LetterDetails /lb:BankTransfer/@referenceNumber	<ul style="list-style-type: none"> The attribute may start with the string "RF". This string is trimmed out for delivery. If attribute length is not between 0 and 23, reference number is not included in the OmaPosti delivery. If the attribute contains other than number characters, the reference number is not included in the OmaPosti delivery. The string "RF", if present, is trimmed out before this check. The pattern for number testing is ([1-9][0-9]*)
/lb:LetterBundle/lb:Bundle/lb:Letter/lb:LetterMeta/ lb:LetterDetails /lb:BankTransfer/lb:PayeeBankAccount	<ul style="list-style-type: none"> If a BankTransfer element contains multiple PayeeBankAccount elements only the first PayeeBankAccount data is included in the OmaPosti delivery.
/lb:LetterBundle/lb:Bundle/lb:Letter [2]/lb:LetterMeta/ lb:LetterDetails/lb:BankTransfer/@totalAmount	<ul style="list-style-type: none"> If totalAmount less than 0.01 or greater than 999999.99, no payment details are sent. However, bank barcode is sent anyway. If totalAmount contains more than two (2) digits after the decimal mark, the part after the mark is truncated without rounding to two (2) digits. For example, 1.45678 would become 1.45

/lb:LetterBundle/lb:Bundle/lb:Letter/lb:LetterMeta/ lb:LetterDetails /lb:BankTransfer/@currency	<ul style="list-style-type: none"> If the currency is other than EUR, payment details are not included in the OmaPosti delivery.
/lb:LetterBundle/lb:Bundle/lb:Lette [2]/lb:LetterMeta/ lb:LetterDetails/lb:BankTransfer/@issueDate	<ul style="list-style-type: none"> issueDate does not have any equivalent in OmaPosti. This data is not included in the OmaPosti delivery.
/lb:LetterBundle/lb:Bundle/lb:Letter [2]/lb:LetterMeta/lb:LetterDetails/lb:BankTransfer/ @totalAmountString	<ul style="list-style-type: none"> totalAmountString does not have any equivalent in OmaPosti. This data is not included in the OmaPosti delivery.
/lb:LetterBundle/lb:Bundle/lb:Letter [2]/lb:LetterMeta/lb:LetterDeta ils/lb:BankTransfer/@type	<ul style="list-style-type: none"> type does not have any equivalent in OmaPosti. This data is not included in the OmaPosti delivery.

5 HYPERLINK TO OMAPOSTI-LETTERS

Hyperlinks may be added to letters that go to OmaPosti. Hyperlink is shown above the actual letter. The receiver activates the link by clicking on it with the mouse and the browser will display the target of the link.

Example:

```
<lb:WebLink link="http://www.postimessaging.com" linkTitle="Posti Messaging site" infoText="Test link to Posti Messaging site" />
```

In more detail: ... = removed text

```
<lb:Letter...>
```

```
<lb:LetterMeta>
```

```
<lb:LetterDetails>
```

```
<lb:Subject.../>
```

```
<lb:LetterContentType.../>
```

```
<lb:WebLink link="http://www.postimessaging.com" linkTitle="Posti Messaging site" infoText="Test link to Posti Messaging site" />
```

```
<lb:WebLink link="http://www.posti.fi" linkTitle="Posti site" infoText="Test link to Posti site"/>
```

```
</lb:LetterDetails>
```

```
</lb:LetterMeta>
```

```
</lb:Letter>
```