



**Cookbook
Consultation
Mutation sender
Version 1.1**

This document is provided to you free of charge by the

eHealth platform

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1 Document management

1.1 Document history

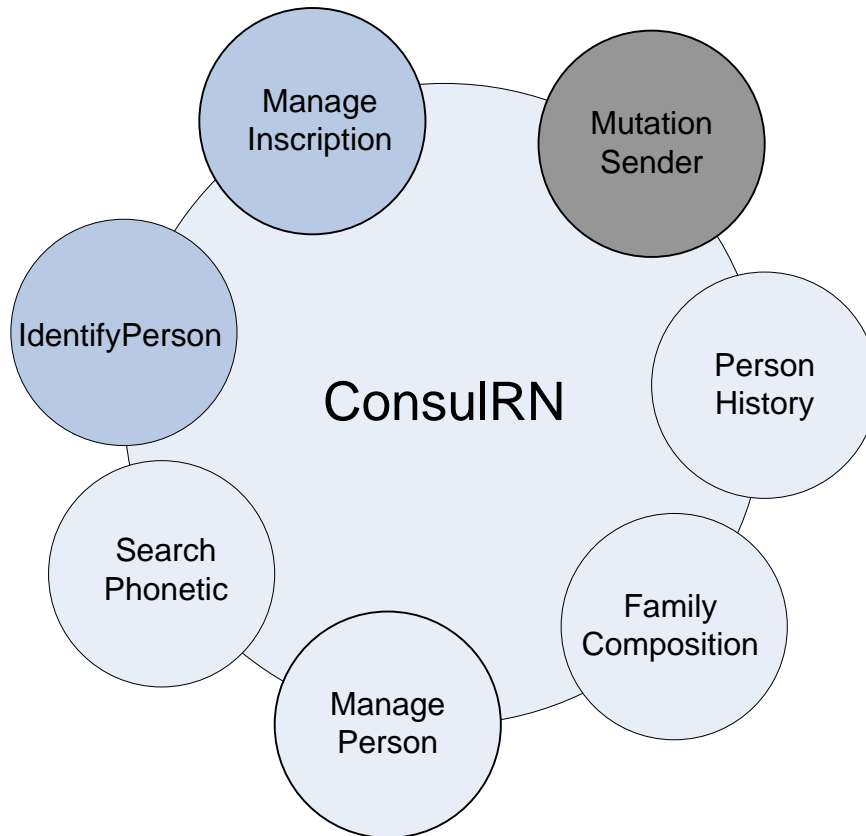
Version	Date	Author	Description of changes / remarks
1.0	20/08/2009	eHealth	Initial version
1.1	26/10/2016	eHealth	Add new list of error codes Update examples Update description of xml element Clarification of the management of SSIN Mutation



2 Introduction

2.1 Goal of the document

This document provides technical information on calling the web service Mutation Sender as provided by the eHealth-platform. This web service is a part of the ConsultRN project.



ConsultRN allows querying the National register and is composed of the 7 following web services:

- manageInscription
- identifyPerson
- PhoneticSearch
- managePerson
- familyComposition
- personHistory
- mutationSender

In order to use the web service mutationSender, you should also consult the manageInscription and identifyPerson cookbook. These web services are used to subscribe a person (patient) to the “mutation of the national register’s subscription” of your organisation.

The web service mutationSender allows retrieving mutations. The eHealth-platform daily receives a list of personal data coming from the National register and the BIS registry as a result of one or more modifications



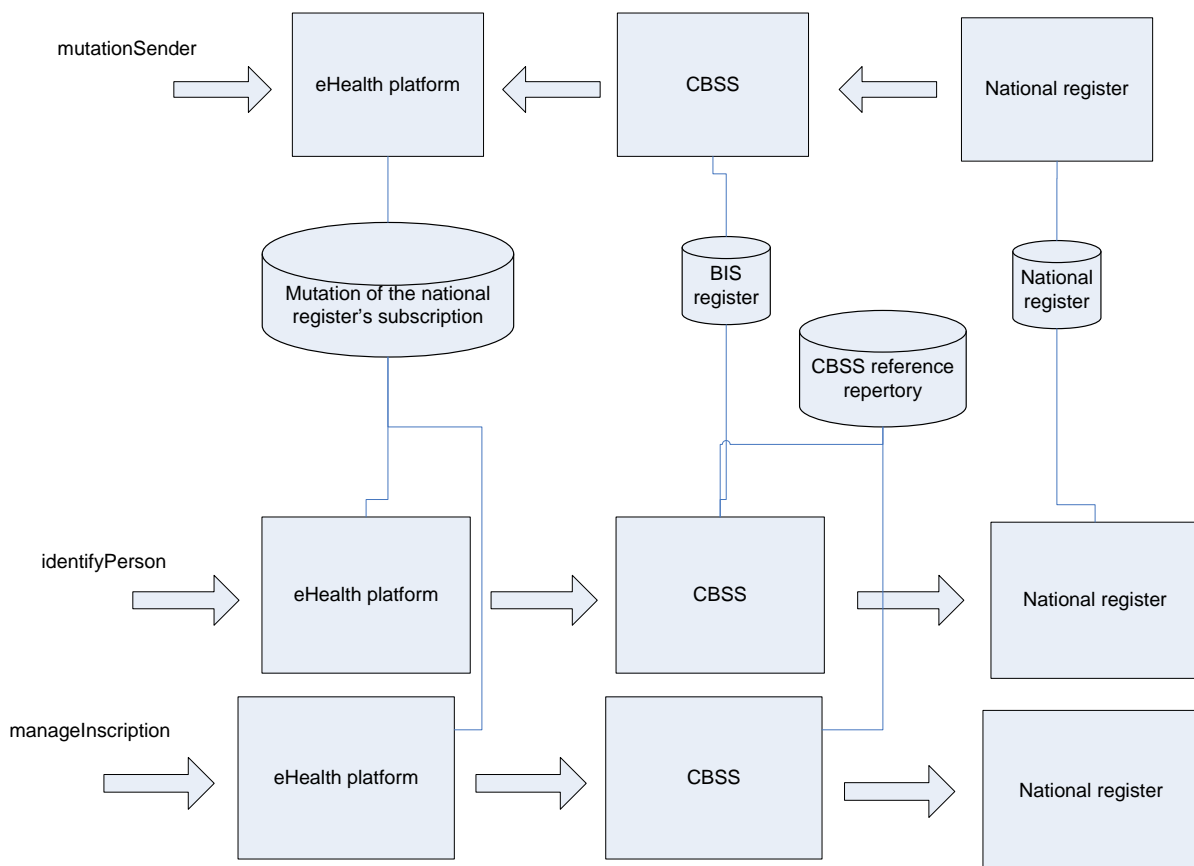
made to these data (for example: change of SSIN, change of address, ...). These personal data (including SSIN, address ...) are what we call mutations.

For each mutation received, the eHealth-platform searches the “mutation of the national register’s subscription”, fed by the manageInscription web service (or by the identify person web service). If there is an inscription for this person containing the day of the mutation linked to your organisation, this mutation will be added to the dedicated file of your organisation. The process also filters the mutation data; only those data you are authorized to access (see form for applicationID for the authorized data) are returned. This process finishes each day at 12 p.m.

Then (preferably from 12 p.m till 15 p.m), you just have to connect to our web service in order to obtain the last file we have for you. The information is not encrypted.

Attention:

- eHealth keeps the mutation available for you during 45 days. Then these mutations are deleted.
- each file is made by the applicationID and by the file received from the CBSS. We advise you to call this web service several times until you receive an error “no file present”.



In this cookbook we explain the structure and content aspects of the possible requests and replies of the eHealth mutationSender web service. An example illustrates each of those messages. Also, a list of possible errors can be found in this document.

For a **proper management of mutation & history of SSIN** within their different applications and their different patient files, and according to their respective sectoral committee authorizations, health organisations are advised to consult the recommendations published in the FAQ’s of the eHealth technical library.

This information should allow (the IT department of) an organization to develop and use the web service call.



Some technical and legal requirements must be met in order to allow the integration of the eHealth web services in client applications; this document was written in order to provide you with an overview of requirements that must be met in order to correctly integrate the web services offered by the eHealth platform.

This document is not a development or programming guide for internal applications; eHealth partners always keep a total freedom within those fields. Nevertheless, in order to interact in a smooth, homogeneous and risk controlled way with a maximum of partners, eHealth partners must commit to comply with specifications, data format and release procedures described in this document. In addition, our partners in the health sector must also comply with the business rules of validation and integration of data within their own applications in order to minimize errors and incidents.

2.2 eHealth document references

Most documents can be found in the technical library on the eHealth portal.

ID	Title	Version	Date	Author
1.	List of relationship codes			eHealth
2.	List of NIS codes			BCSS
3.	Cookbook Manage inscription			eHealth
4.	Cookbook identifyPerson			eHealth
5.	Cookbook Person History			eHealth
6.	List of supported organisations			eHealth



3 Support

3.1 Certificates

In order to access the secured eHealth environment you have to obtain an eHealth certificate which is used to identify the initiator of the request. In case you don't have one, please consult:

Dutch version:

<https://www.ehealth.fgov.be/nl/support/basisdiensten/certificaten>

French version:

<https://www.ehealth.fgov.be/fr/support/services-de-base/certificats>

For technical issues regarding eHealth certificates

Acceptance: **acceptance-certificates@ehealth.fgov.be**

Production: **support@ehealth.fgov.be**

3.2 Support in general

For issues in production only

eHealth ContactCenter:

- Phone: 02/788 51 55
- Mail: **support@ehealth.fgov.be**
- Contact Form :
 - **<https://www.ehealth.fgov.be/nl/neem-contact-op-met-de-openbare-instelling-eHealth-platform>** (Dutch)
 - **<https://www.ehealth.fgov.be/fr/contactez-institution-publique-plate-forme-eHealth>** (French)

FOR PARTNERS AND SOFTWARE DEVELOPERS ONLY

- For business issues please contact: **info@ehealth.fgov.be**
- For technical issues in production please contact: **support@ehealth.fgov.be** or call 02/788 51 55
- For technical issues in acceptance please contact: **integration-support@ehealth.fgov.be**



4 Technical, business and privacy requirements

- The call to the mutation sender web service is conditioned to the authorization of the sectoral committee and the compliance with the integration procedure. By applying this procedure, the eHealth platform will provide you with your applicationID which is used by eHealth to grant specific rights:
 - Dutch version:
<https://www.ehealth.fgov.be/nl/basisdiensten/consultrr/meer-weten>
 - French version:
<https://www.ehealth.fgov.be/fr/services-de-base/consultrn/en-savoir-plus>
- An eHealth certificate which is used to identify the initiator of the request. If you do not have one, see:
 - Dutch version:
<https://www.ehealth.fgov.be/nl/support/basisdiensten/ehealth-certificaten>
 - French version:
<https://www.ehealth.fgov.be/fr/support/services-de-base/certificats-ehealth>
- Time synchronisation: eHealth servers are synchronized to a pool of global servers using NTP protocol. Partner clock offset cannot be by more than 60 seconds against eHealth's; otherwise the request will be discarded.



5 Release and test procedures

5.1 Request to integrate the service (acceptation environment first)

Integration procedures for the different type of authorized actor are described on the portal:

- Dutch version:
<https://www.ehealth.fgov.be/nl/basisdiensten/consultrr/meer-weten>
- French version:
<https://www.ehealth.fgov.be/fr/services-de-base/consultrn/en-savoir-plus>

Users will first need to request an agreement from the sectoral committee (secretary@socsec.committee.belgium.be).

They will receive an approval letter from the sectoral committee and an “application ID”. The “integration team” will subsequently support the rest of the integration.

5.2 Development and Test procedures

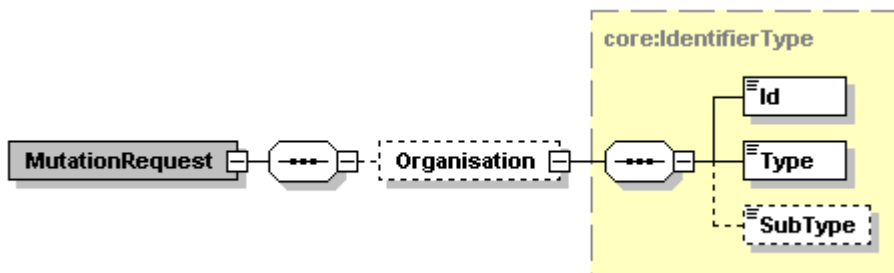
- The consult RN test consists of a set of test scenarios that cover the integration of the set of web services (Identify person, Phonetic search, manage inscription, person history and mutation sender).
- The test scenarios are available in the technical library.
- In order to get your production application ID, you should first prove in the acceptance environment that you’ve correctly implemented the call to the services. Therefore, you’ll need to complete the test scenario form and send it to the integration team (Integration-support@ehealth.fgov.be)



6 General structure

6.1 Formulating a Request

The request can contain your identification data (not mandatory):



Field name	Description
Id	Number identifying the organization
Type	The Type field identifies the organization type: <ul style="list-style-type: none"> • RIZIV-INAMI number, use type NIHII • Enterprise number, use type "CBE" • EHP number, use type "EHP"
Subtype (Optional)	The Subtype field provides further specification on the organization type. For example, a hospital is identified with the type NIHII and the subtype HOSPITAL. The list of supported organizations can be found on the eHealth portal : https://www.ehealth.fgov.be/fr/support/services-de-base/webservices-consultrn-bulk-consultrn https://www.ehealth.fgov.be/nl/support/webservices-consultrr-bulk-consultrr

Example:

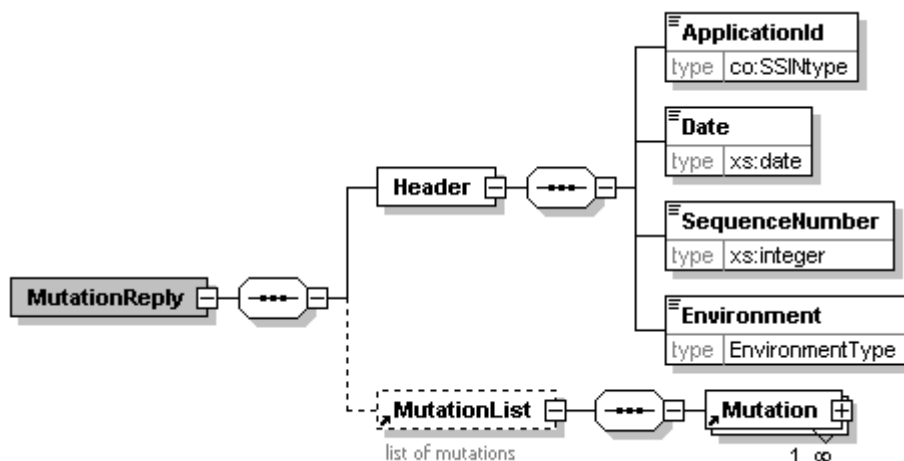
```

<?xml version="1.0" encoding="UTF-8"?>
<ns1:MutationRequest xsi:schemaLocation="urn:be:fgov:ehealth:consultRN:1_0:protocol Mutation-1-0.xsd"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:ns1="urn:be:fgov:ehealth:consultRN:1_0:protocol">
  <Organisation>
    <Id>71099911</Id>
    <Type>NIHII</Type>
    <SubType>HOSPITAL</SubType>
  </Organisation>
</MutationRequest>
  
```

6.2 Interpretation of the Reply

The parts of the reply sent back in response to a request for mutations are discussed below.





The first part contains information on the destination of this mutation:

Field name	Description
Header/ApplicationID	The ApplicationID contains a number given by eHealth identifying the organization and the authorization given for a certain purpose to this organization (same format as an SSIN).
Header/Date	This field contains the date of creation of the mutation.
Header/SequenceNumber	This field contains a number which is a combination of the applicationID and the date. It is unique. You should always use the smallest first.
Header/Environment	This field contains an indication of the environment: <ul style="list-style-type: none"> • A: acceptance • P: production

The second part contains a mutation list (more information about the mutation, see section 5.1).

Remarks:

1. The reply returns all current information available within the register on a person. This includes as well old information, updated information as new information.
2. Only the data to which you are authorized to access are returned.
3. Results may be as well in uppercase or in Lowercase.

Example:

- Mutation where information linked to SSIN is modified (mutation type: 12131200)

```

<ns0:MutationReply xmlns:ns0="urn:be:fgov:ehealth:consultRN:1_0:protocol">
<Header>
<ApplicationID>xxxxxxxxxx</ApplicationID>
<Date>2009-01-01</Date>
<SequenceNumber>1</SequenceNumber>
<Environment>A</Environment>
</Header>
<ns0:MutationList>
<ns0:Mutation>
<MutationInformation>
<Author>RR_RN</Author>
<Type>12131200</Type>

```



```

<Description Lang="EN">Ssin is modified</Description>
</MutationInformation>
<Person>
<SSIN>00010100000</SSIN>
<PersonData>
<Birth>
<Date>2000-01-01</Date>
<Localisation>
<Description Lang="FR">JEMEPPE-SUR-SAMBRE</Description>
<Municipality>
<InsCode>92140</InsCode>
</Municipality>
<Country>
<InsCode>150</InsCode>
</Country>
</Localisation>
</Birth>
<Name>
<First>PERSONNE</First>
<Last>TEST</Last>
</Name>
<Gender>UNKNOWN</Gender>
<Nationality>
<InsCode>150</InsCode>
<Description>BELGIQUE</Description>
</Nationality>
<Civilstate ModificationDate="2000-01-01">
<Code>10</Code>
</Civilstate>
<Address>
<StandardAddress>
<Street>
<Description Lang="NL">STRAAT ONBEKEND</description>
</Street>
<Housenumber>25</Housenumber>
<Municipality>
<InsCode>11002</InsCode>
<PostalCode>2000</PostalCode>
<Description>ANTWERPEN</Description>
</Municipality>
<Country>
<InsCode>150</InsCode>
<Description Lang="NL">BELGIË</Description>
</Country>
</StandardAddress>
</Address>
</PersonData>
</Person>
</ ns0:Mutation>
</ns0:MutationList>
</ns0:MutationReply>

```

- Mutation where SSIN was replaced by another SSIN (mutation type: 12131000)

```

<?xml version="1.0" encoding="UTF-8"?>
<ns0:MutationReply xmlns:ns0="urn:be:fgov:ehealth:consultRN:1_0:protocol">
<Header>
<ApplicationID>xxxxxxxxxx</ApplicationID>
<Date>2009-01-01</Date>
<SequenceNumber>1</SequenceNumber>
<Environment>A</Environment>
</Header>
<ns0:MutationList>
<ns0:Mutation>
<MutationInformation>
<Author>CBSS</Author>
<Type>12131000</Type>
<Description Lang="EN">Ssin is replaced by another ssin.</Description>

```



```

<Description Lang="EN">Old SSIN : 00010200000</Description>
</MutationInformation>
<Person Origin="RN_RR">
<SSIN>00010100000</SSIN>
<PersonData>
<Birth ModificationDate="1975-01-01">
<Date>1975-01-01</Date>
<Localisation>
<Description>PRIVATE</Description>
<Country>
<InsCode>315</InsCode>
</Country>
</Localisation>
</Birth>
<Name>
<First>FIRSTNAME</First>
<Middle>MIDDLENAME</Middle>
<Last>LASTNAME</Last>
</Name>
<Gender>MALE</Gender>
<Nationality ModificationDate="1975-01-01">
<InsCode>315</InsCode>
</Nationality>
<Civilstate ModificationDate="1997-01-01">
<Code>20</Code>
<Localisation>
<Description>PRIVATE</Description>
<Country>
<InsCode>315</InsCode>
</Country>
</Localisation>
<Partner>
<SSIN>00010300000</SSIN>
<Name>
<First>FIRSTNAME</First>
<Last>LASTNAME</Last>
</Name>
</Partner>
</Civilstate>
<Address Origin="RN_RR" ModificationDate="2011-07-29">
<StandardAddress>
<Street>
<Description Lang="FR">AVENUE DE L'EUROPE</Description>
</Street>
<Housenumber>15</Housenumber>
<Municipality>
<InsCode>52011</InsCode>
<PostalCode>6031</PostalCode>
<Description Lang="FR">CHARLEROI</Description>
</Municipality>
<Country>
<InsCode>150</InsCode>
<Description Lang="NL">BELGIE</Description>
<Description Lang="FR">BELGIQUE</Description>
</Country>
</StandardAddress>
</Address>
</PersonData>
</Person>
</ ns0:Mutation>
</ns0:MutationList>
</ns0:MutationReply>

```



- Mutation where SSIN was cancelled (mutation type: 12131100)

```
<?xml version="1.0" encoding="UTF-8"?>
<ns0:MutationReply xmlns:ns0="urn:be:fgov:ehealth:consultRN:1_0:protocol">
  <Header>
    <ApplicationID>xxxxxxxxxx</ApplicationID>
    <Date>2009-01-01</Date>
    <SequenceNumber>1</SequenceNumber>
    <Environment>A</Environment>
  </Header>
  <ns0:MutationList>
    <ns0:Mutation>
      <MutationInformation>
        <Author>CBSS</Author>
        <Type>12131100</Type>
        <Description Lang="EN"> Ssin is cancelled.</Description>
      </MutationInformation>
      <Person>
        <SSIN>00010100000</SSIN>
      </Person>
    </ns0:Mutation>
  </ns0:MutationList>
</ns0:MutationReply>
```

If no more mutation can be retrieved, the following reply will be sent:

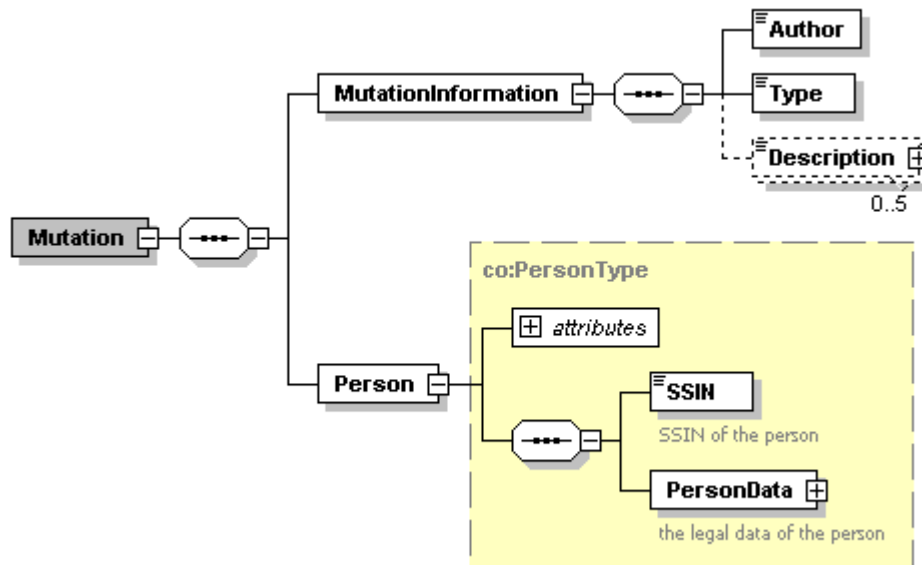
```
<?xml version="1.0" encoding="UTF-8"?>
<ns0:MutationReply xmlns:ns0="urn:be:fgov:ehealth:consultRN:1_0:protocol">
  <Header>
    <ApplicationID>0</ApplicationID>
    <Date>2010-01-29+01:00</Date>
    <SequenceNumber>0</SequenceNumber>
    <Environment>A</Environment>
  </Header>
</ns0:MutationReply>
```

In case of a technical error with the service, please contact the contact center (see Section 3)



7 Used types

7.1 MutationType



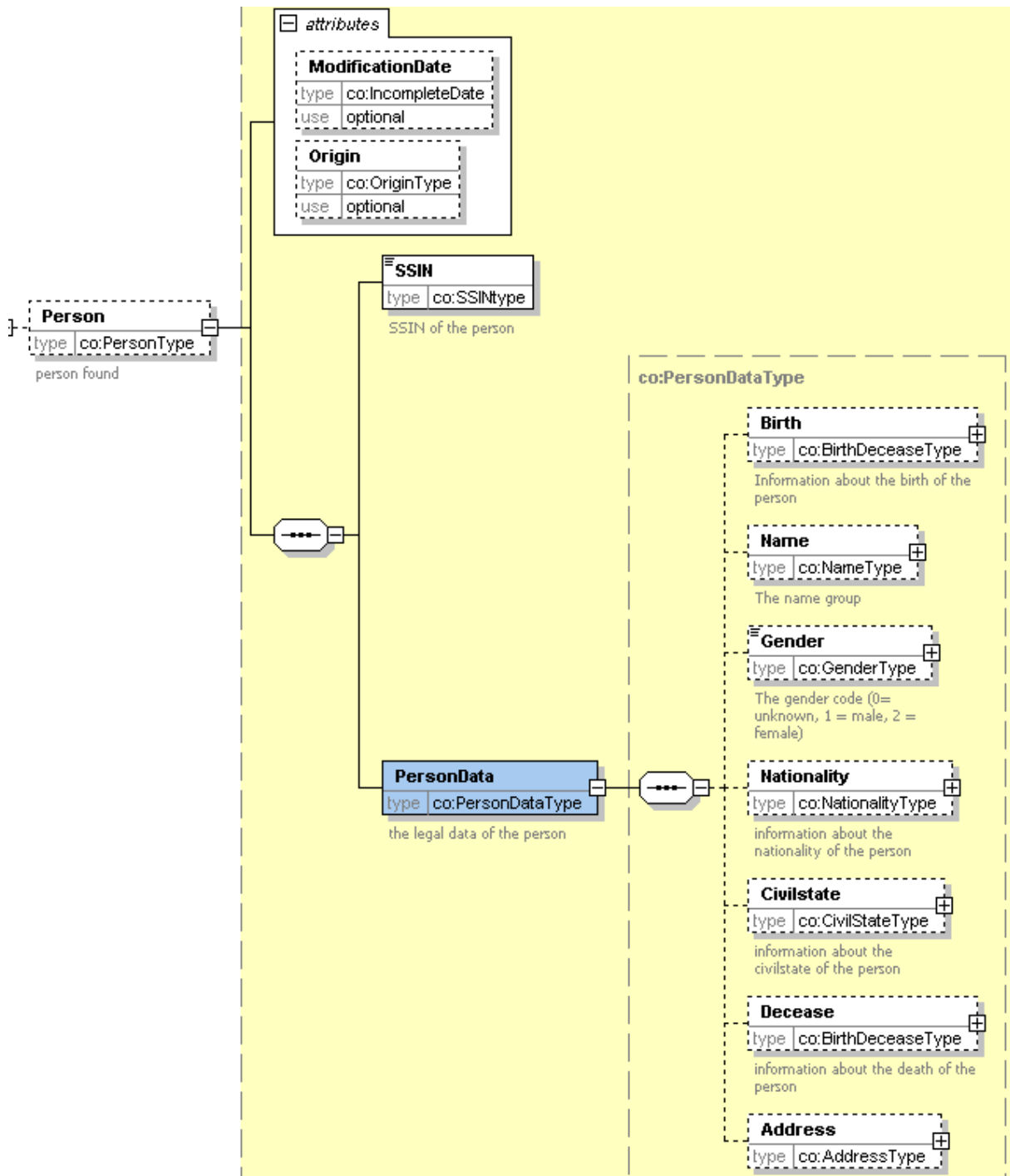
The first part contains information on the type of mutation:

Field name	Description
Author	This field contains the source of the information: the national register or BIS register.
Type	This field contains the type of mutation: 12131000 means SSIN was replaced by another SSIN. 12131100 means SSIN was cancelled. 12131200 means SSIN has been modified. .
Description	This field contains a description of the type of mutation.

The second part contains information on the retrieved person (see section 5.2).

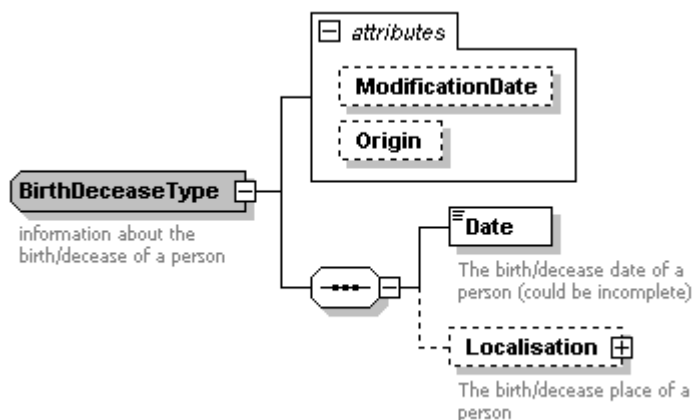


7.2 PersonType



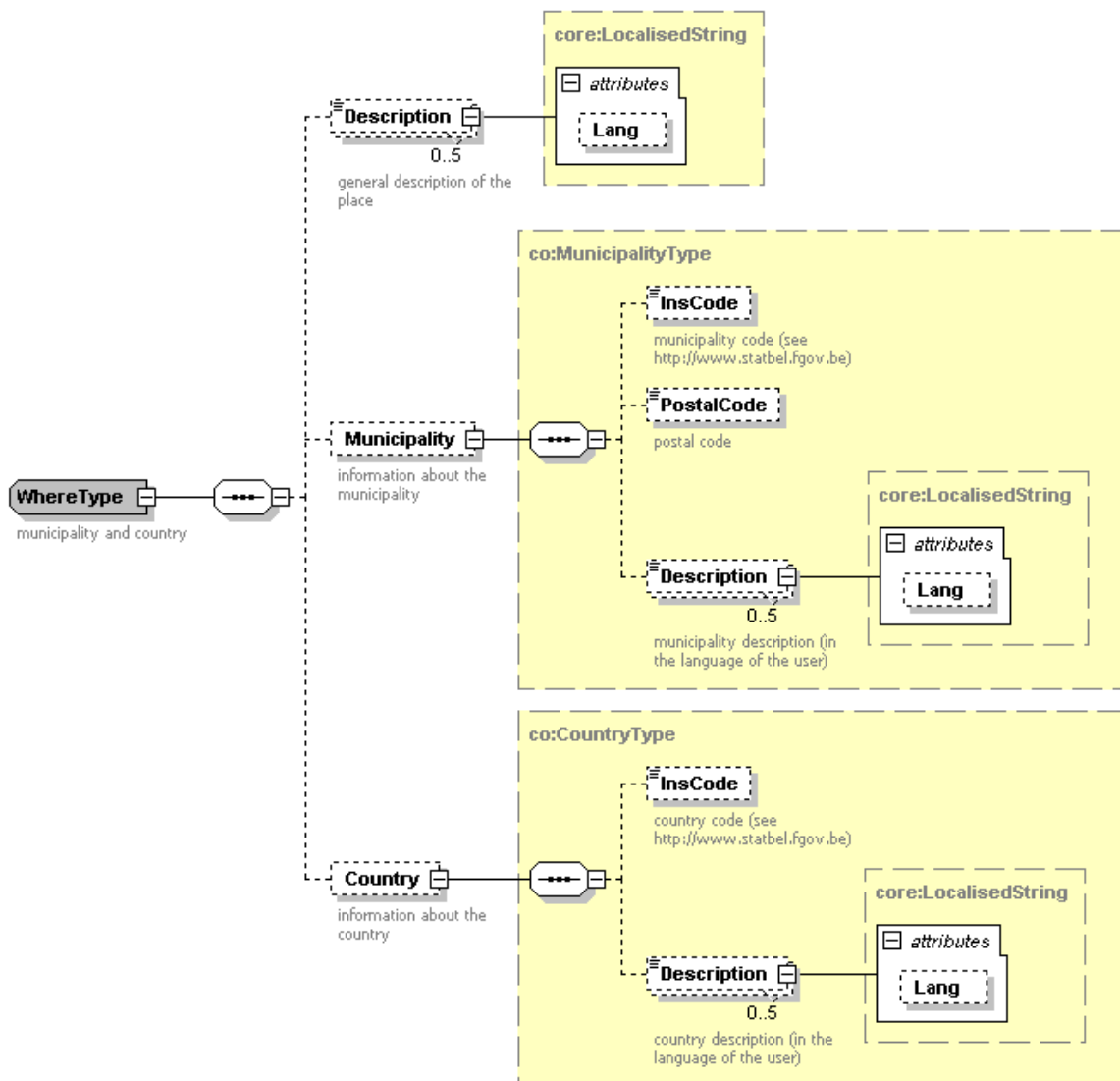
Field name	Description
@ModificationDate	This field contains the date since when this information is valid (yyyy-mm-dd).
@Origin	This field contains the source of this information: national register (NR) of BIS register(CBSS).
SSIN	The SSIN field contains the INSS number of the individual.
Birth	This block contains information about the birth date and location (see section 5.3).
Name	This block contains information about the name of the person (see section 5.5).
Gender	This block contains information about the gender of the person. The possible values are: MALE, FEMALE, UNKNOWN (see section 5.6).
Nationality	This block contains information about the nationality of the person (see section 5.7).
Civilstate	This block contains information about the civil state of the person (see section 5.8).
Decease	This block contains information about the decease of the person (only present if the person is deceased, see section 5.3).
Address	This block contains the address of the person (see section 5.9).

7.3 BirthDeceaseType



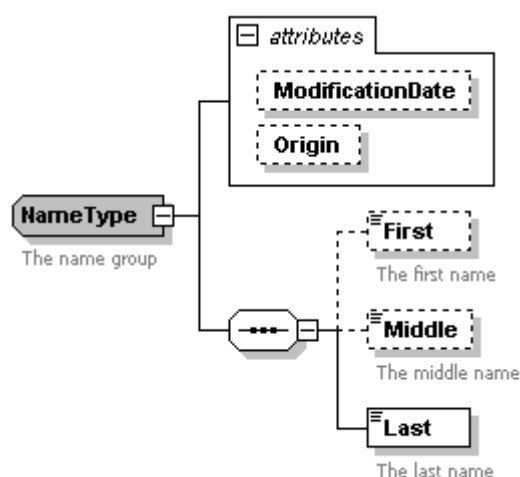
Field name	Description
@ModificationDate (deprecated)	This field contains the date since when this information is valid (yyyy-mm-dd).
@Origin	This field contains the source of this information: national register (NR) of BIS register(CBSS).
Date	This field contains the date of birth or decease (yyyy-mm-dd). The date can be incomplete (two possibilities: only the year is known: 1979-00-00 or only the year and month are known: 1979-10-00).
Localisation	This block contains the location of the birth or the decease (for more information see section 5.4).

7.4 WhereType



Field name	Description
Description (not used)	This field contains a description of the location (this information can't be linked to a municipality or a country).
Municipality	This block contains information about the municipality (only used when the location is in Belgium): <ul style="list-style-type: none"> • INS code contains the INS code of the municipality • Description contains the description of the municipality • Postal code contains the postal code of the municipality
Country	This block contains information about the country : <ul style="list-style-type: none"> • INS code contains the INS code of the country • Description contains the description of the country

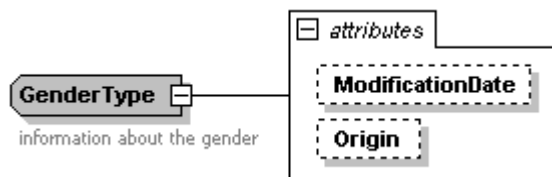
7.5 NameType



Field name	Description
@ModificationDate	This field contains the date since when this information is valid (yyyy-mm-dd).
@Origin	This field contains the source of this information: national register (NR) of BIS register (CBSS).
First	This field contains the first name of the person.
Middle	This field contains the middle name of the person.
Last	This field contains the last name of the person.

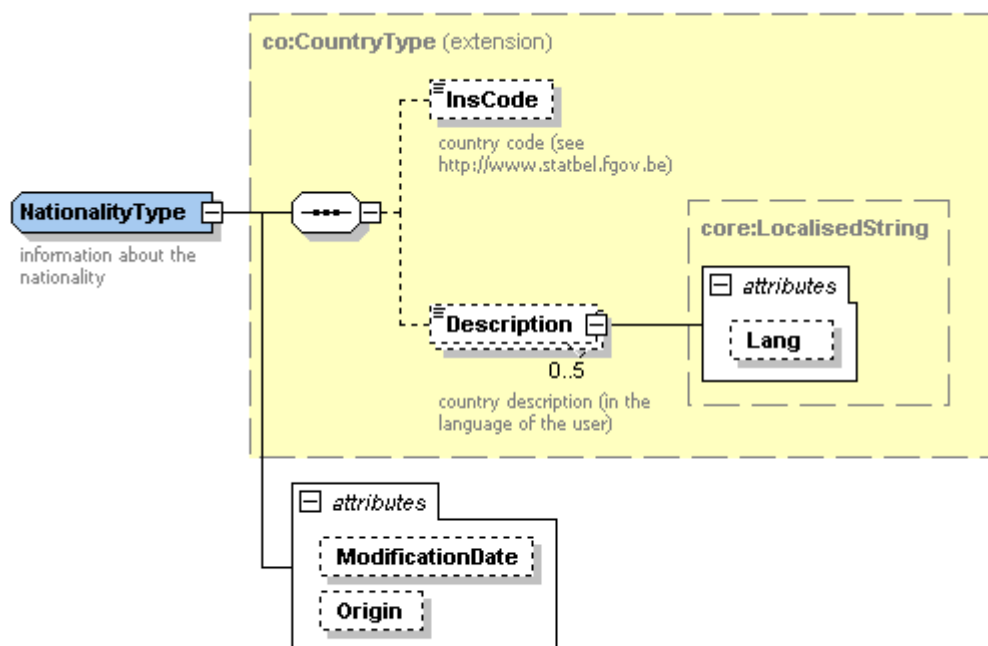


7.6 GenderType



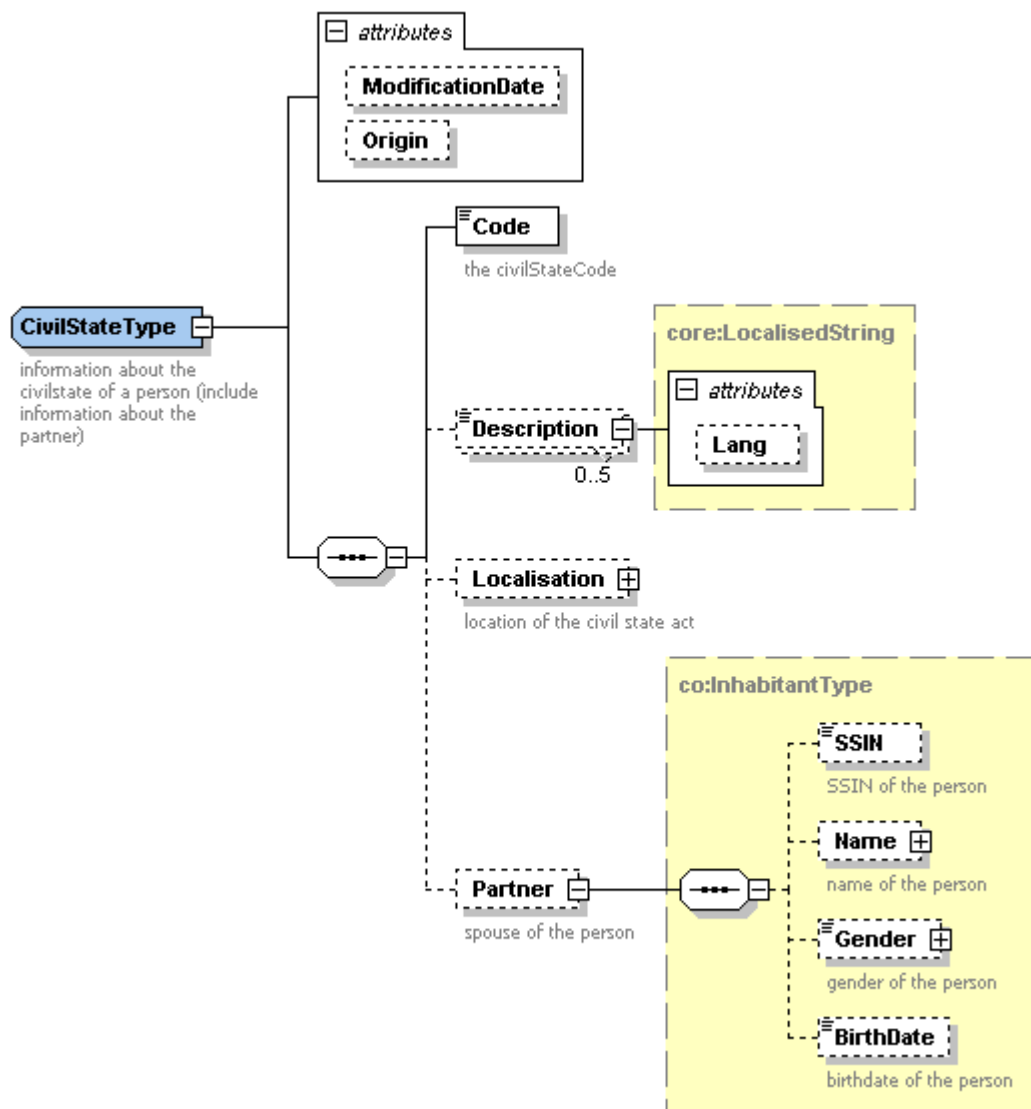
Field name	Description
@ModificationDate	This field contains the date since when this information is valid (yyyy-mm-dd).
@Origin	This field contains the source of this information: national register (NR) of BIS register(CBSS).

7.7 NationalityType



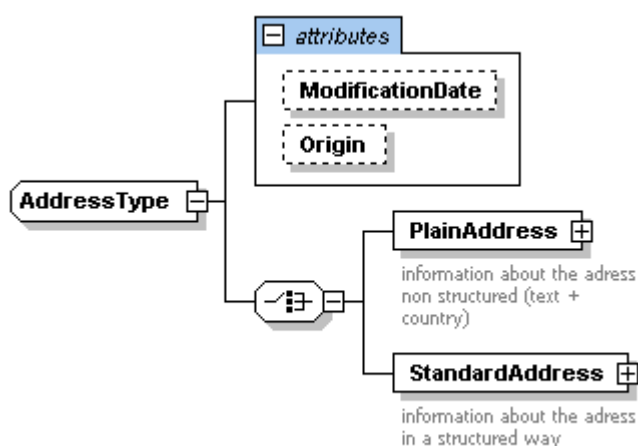
Field name	Description
@ModificationDate	This field contains the date since when this information is valid (yyyy-mm-dd).
@Origin	This field contains the source of this information: national register (NR) of BIS register (CBSS).
InsCode	This field contains the INS code of the country.
Description	This field contains the description of the country.

7.8 CivilStateType



Field name	Description
@ModificationDate	This field contains the date since when these information is valid (yyyy-mm-dd)
@Origin	This field contains the source of this information: national register (NR) or BIS register (CBSS).
Code	This field contains the code indicating the civil state of the person.
Description	This field contains the description of this code.
Localisation	This block contains the localisation linked to civil state. Example: localization of wedding... (see section 5.4).
Partner	This field contains information about the partner : <ul style="list-style-type: none"> • the SSIN • the name (see section 5.5) • the gender (see section 5.6) • the birthdate

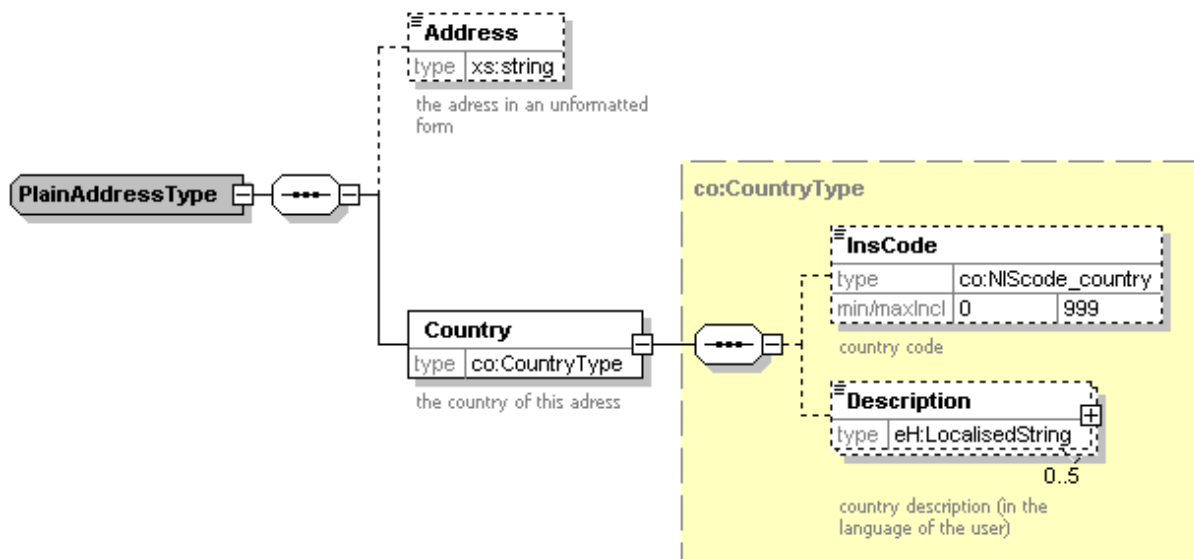
7.9 AddressType



Field name	Description
@ModificationDate	This field contains the date since when this information is valid (yyyy-mm-dd).
@Origin	This field contain the source of this information: national register (NR) of BIS register (CBSS).
PlainAddress	This block contains an address “unstructured”, only used when no standard address is available (more information see section 5.10).
StandardAddress	This block contains an address with clear separation: street, number, municipality (see section 5.11).

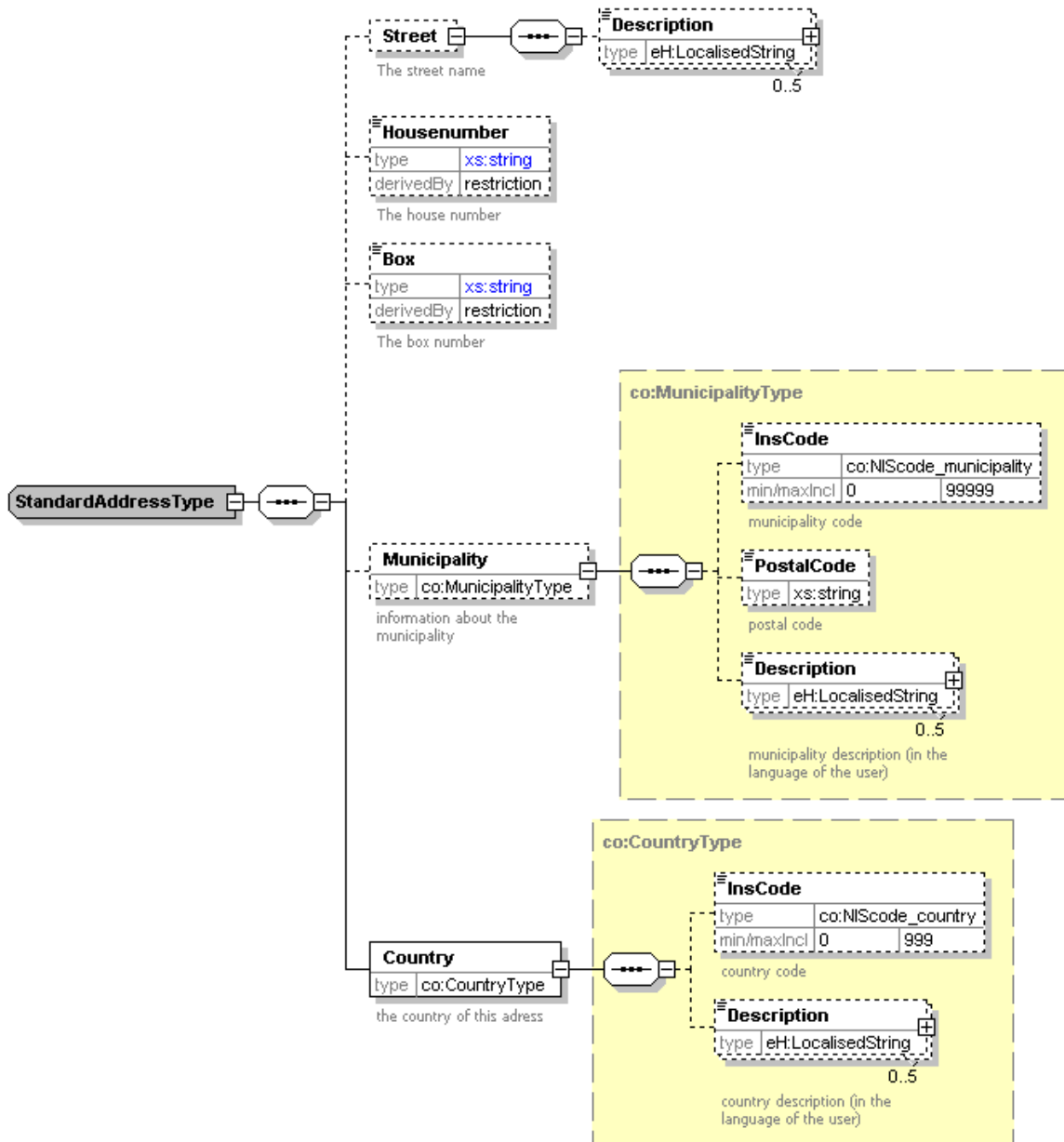


7.10 PlainAddressType



Field name	Description
Address	This field contains all the known information about the address (except the country).
InsCode	This field contains the INS code of the country.
Description	This field contains the description of the country.

7.11 StandardAddressType



Field name	Description
Street/Description	This field contains the street (and the translation if the street is in a bilingual municipality).
House number	This field contains the number.
Box	This field contains the box.
Municipality/InsCode	This field contains the INS code of the commune (only if the municipality is in Belgium).
Municipality/Postalcode	This field contains the postal code.
Municipality/Description	This field contains the description of the municipality (and the translation if this is in a bilingual municipality).
Country/InsCode	This field contains the Ins code of the country.
Country/Description	This field contains the description of the country.



8 Security

Web service security used in this manner is following the common standards. Your call will provide:

- SSL one way
- An X.509 certificate. This will contain the identifiers of the caller: NIHL number or enterprise number. More information on how to obtain this certificate: see Section 3.1
- Time to live of the message: one minute.
- Signature of the timestamp, body and binary security token. This will allow eHealth to verify the integrity of the message and the identity of the message author.
- No encryption on the message.

