eIDAS SAML Attribute Profile

Version 1.4

Document created by:

eIDAS eID Technical Subgroup

Document adopted by:

eIDAS Cooperation Network

DOCUMENT HISTORY

Version	Date	Adopted by	Short Description of Changes
1.0	26 January 2016	eIDAS Cooperation Network	/
1.1	16 December 2016	eIDAS Cooperation Network	Various updates
1.2	27 September 2019	eIDAS Cooperation Network	• Use of non-notified eID schemes • Identification of Relying parties • Fixes in attributes profiles and cryptographic requirements • Improvements in metadata handling
1.3	20 June 2023	eIDAS Cooperation Network	Same as 1.2
1.4	XX. Xxxx 2023	eIDAS Cooperation Network	• Clarify Countrycode for GreeceIntegrate eIDAS Common Attributes v1

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1. Introduction

The eIDAS interoperability framework including its national entities (eIDAS-Connector and eIDAS-Service) need to exchange messages including personal and technical attributes to support cross-border identification and authentication processes. For the exchange of messages, the use of the SAML 2.0 specifications has been agreed in the eIDAS technical subgroup and is laid down in the eIDAS Interoperability Architecture.

Since the eIDAS interoperability architecture should use widely used standards, the following SAML- based profiles are taken into utmost account in this paper:

- Kantara Initiative eGovernment Implementation Profile of SAML V2.0 [SAMLeGov2.0]

- STORK 2.0 D4.4 First version of Technical Specifications for the cross border Interface [STORK]

1.1. DEFINITIONS

Terms used throughout this document are defined in [eIDAS Interoperability Architecture]. In addition, when referring to SAML technology, an eIDAS-Service can be seen as SAML identity provider and an eIDAS-Connector as a SAML service provider.

1.2. KEY WORDS

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119]. The key word "CONDITIONAL" is to be interpreted as follows:

CONDITIONAL: The usage of an item is dependent on the usage of other items. It is therefore further qualified under which conditions the item is REQUIRED or RECOMMENDED.

2. Attributes

The complete list of attributes included in the eIDAS minimum data sets are defined in the Annex of the interoperability framework implementing act.

All attributes for the eIDAS minimum data sets can be derived from the ISA Core Vocabulary. In the case of natural persons refer to the Core Person Vocabulary at
https://joinup.ec.europa.eu/asset/core_person/asset_release/core-person-vocabulary, in the case of legal persons also refer to definitions for Core Business Vocabulary at
https://joinup.ec.europa.eu/asset/core_business/asset_release/core-business-vocabulary.

The following sections describe the mandatory and optional elements for both natural and legal persons as required by the eIDAS interoperability framework in the context of the Core Vocabulary.

2.1. SAML ATTRIBUTE NAMING

The NameFormat XML attribute in <Attribute> elements MUST be urn:oasis:names:tc:SAML:2.0:attrname-format:uri.

The XML attribute Name value MUST be one of the descriptors defined in sections 2.2 Attributes for Natural Persons, and 2.3 Attributes for Legal Persons.

The optional XML attribute FriendlyName value, if present, MUST be one of the friendly descriptors associated with the Name descriptor.

Examples are included in this document for illustrative purposes (see sections 2.2 and 2.3), it is expected that these schema and examples will be refined before publication of the reference architecture.

2.2. ATTRIBUTES FOR NATURAL PERSONS

2.2.1. Mapping eIDAS minimum data set for Natural Persons to ISA Core Vocabulary

The ISA Core Vocabulary describes a highly structured way of encoding person data that is not ideal for message creation or processing with SAML. The approach taken in this profile is to adopt the base type specified by ISA Core Vocabulary rather than the complex data types required for full compatibility with the standard.

The following Mandatory attributes are required by the Regulation.

Attribute (Friendly) Name	eIDAS MDS Attribute	ISA Core Vocab Equivalent	Notes
FamilyName	Current Family Name	cbc:FamilyName	Encoded as xsd:string
FirstName	Current First Names	cvb:GivenName	Encoded as xsd:string
DateOfBirth	Date of Birth	cvb:BirthDate	Encoded as xsd:date
PersonIdentifier	Unique Identifier	cva:Cvidentifier	Encoded as xsd:string

The following Optional attributes MAY be supplied by a MS if available and acceptable to national law.

Attribute (Friendly) Name	eIDAS MDS Attribute	ISA Core Vocab Equivalent	Notes
BirthName	First Names at Birth	cvb:BirthName	Encoded as xsd:string
BirthName	Family Name at Birth	cvb:BirthName	See above re birth names
PlaceOfBirth	Place of Birth	cva:BirthPlaceCvlocation	Encoded as xsd:string
CurrentAddress	Current Address	cva:Cvaddress	Encoded as multiple xsd:string elements
Gender	Gender	cvb:GenderCode	Encoded as xsd:string with a restriction of selection: Male, Female, Unspecified
Nationality	Nationality	cbc:Nationality	Encoded as a xsd:string element with a restriction of selection : ISO 3166-1 alpha-2 country code values
CountryOfBirth	CountryOfBirth	cva:BirthCountryCvlocation	Encoded as a xsd:string element with a restriction of selection : ISO 3166-1 alpha-2 country code values
TownOfBirth	TownOfBirth	cva:BirthPlaceCvlocation	Encoded as a xsd:string element
CountryOfResidence	CountryOfResidence	adminUnitL1	Encoded as a xsd:string element with a restriction of selection : ISO 3166-1 alpha-2 country code values
PhoneNumber	PhoneNumber	cbc:Telephone	Encoded as a xsd:string element

EmailAddress	EmailAddress	cbc:ElectronicMail	Encoded as a xsd:string element

2.2.2. Attribute Schema

The following attribute schema is based on the definition of Core Person defining the minimum set of classes and properties for description of a natural person according to the ISA Core Vocabulary (https://joinup.ec.europa.eu/asset/core_person/asset_release/core-person-vocabulary).

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema
      xmlns="http://eidas.europa.eu/attributes/naturalperson"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      targetNamespace="http://eidas.europa.eu/attributes/naturalperson"
      elementFormDefault="qualified"
      attributeFormDefault="unqualified"
      version="1">

    <xsd:attribute name="LatinScript" type="xsd:boolean" default="true"/>

    <!--
          Mandatory attribute types for a natural person.
    -->
    <xsd:element name="FamilyName" type="eidas:CurrentFamilyNameType"/>
    <xsd:element name="FirstName" type="eidas:CurrentGivenNameType"/>
    <xsd:element name="DateOfBirth" type="eidas:DateOfBirthType"/>
    <xsd:element name="PersonIdentifier" type="eidas:PersonIdentifierType"/>

    <xsd:simpleType name="PersonIdentifierType">
      <xsd:annotation>
        <xsd:documentation>
          Unique identifier for the natural person as defined by the eIDAS
Regulation.
        </xsd:documentation>
      </xsd:annotation>
      <xsd:restriction base="xsd:string"/>
    </xsd:simpleType>

    <xsd:complexType name="CurrentFamilyNameType">
      <xsd:annotation>
        <xsd:documentation>
          Current family name of the natural person.
        </xsd:documentation>
      </xsd:annotation>
      <xsd:simpleContent>
        <xsd:extension base="xsd:string">
          <xsd:attribute ref="LatinScript"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>

    <xsd:complexType name="CurrentGivenNameType">
      <xsd:annotation>
        <xsd:documentation>
          Current given names of the natural person.
        </xsd:documentation>
```

```
      </xsd:annotation>
      <xsd:simpleContent>
        <xsd:extension base="xsd:string">
          <xsd:attribute ref="LatinScript"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>

    <xsd:simpleType name="DateOfBirthType">
      <xsd:annotation>
        <xsd:documentation>
          Date of Birth for the Natural Person (Based on xsd:date i.e. YYYY-MM-
DD format).
        </xsd:documentation>
      </xsd:annotation>
      <xsd:restriction base="xsd:date"/>
    </xsd:simpleType>

    <!--
          Optional attribute types for a natural person.
    -->

    <xsd:element name="BirthName" type="eidas:BirthNameType" minOccurs="0"/>
    <xsd:element name="PlaceOfBirth" type="eidas:PlaceOfBirthType"
                 minOccurs="0"/>
    <xsd:element name="CurrentAddress" type="eidas:CurrentAddressType"
                 minOccurs="0"/>
    <xsd:element name="Gender" type="eidas:GenderType" minOccurs="0"/>
    <xsd:element name="Nationality" type="eidas:NationalityType" minOccurs="0"/>
    <xsd:element name="CountryOfBirth" type="eidas:CountryOfBirthType"
                 minOccurs="0"/>
    <xsd:element name="TownOfBirth" type="xs:string" minOccurs="0"/>
    <xsd:element name="CountryOfResidence" type="eidas:CountryOfResidenceType"
                 minOccurs="0"/>
    <xsd:element name="PhoneNumber" type="xs:string" minOccurs="0"/>
    <xsd:element name="EmailAddress" type="xs:string" minOccurs="0"/>


    <xsd:complexType name="CurrentAddressStructuredType">
        <xsd:annotation>
            <xsd:documentation>
                Current address of the natural person.
            </xsd:documentation>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="PoBox" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
            <xsd:element name="LocatorDesignator" type="xsd:string"
minOccurs="0" maxOccurs="1"/>
            <xsd:element name="LocatorName" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
            <xsd:element name="CvaddressArea" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
            <xsd:element name="Thoroughfare" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
            <xsd:element name="PostName" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
            <xsd:element name="AdminunitFirstline" type="xsd:string"
minOccurs="0" maxOccurs="1"/>
```

```xml
            <xsd:element name="AdminunitSecondline" type="xsd:string"
minOccurs="0" maxOccurs="1"/>
            <xsd:element name="PostCode" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
        </xsd:sequence>
    </xsd:complexType>

    <xsd:simpleType name="CurrentAddressType">
        <xsd:annotation>
            <xsd:documentation>
                Current address of the natural person as a base64 encoded
string.
            </xsd:documentation>
        </xsd:annotation>
        <xsd:restriction base="xsd:string"/>
    </xsd:simpleType>

    <xsd:simpleType name="GenderType">
        <xsd:annotation>
          <xsd:documentation>
            Gender of the natural person.
          </xsd:documentation>
        </xsd:annotation>
        <xsd:restriction base="xsd:string">
          <xsd:enumeration value="Male"/>
          <xsd:enumeration value="Female"/>
          <xsd:enumeration value="Unspecified"/>
        </xsd:restriction>
    </xsd:simpleType>

    <xsd:complexType name="BirthNameType">
      <xsd:annotation>
        <xsd:documentation>
            First name(s) and family name(s) of the natural person at birth.
        </xsd:documentation>
      </xsd:annotation>
      <xsd:simpleContent>
        <xsd:extension base="xsd:string">
          <xsd:attribute ref="LatinScript"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>

    <xsd:complexType name="PlaceOfBirthType">
      <xsd:annotation>
        <xsd:documentation>
          Place of birth for a natural person.
        </xsd:documentation>
      </xsd:annotation>
      <xsd:simpleContent>
        <xsd:extension base="xsd:string">
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>

    <xsd:simpleType name="NationalityType">

      <xsd:annotation>

        <xsd:documentation>

          Nationality of the natural person (Two-letter country codes according
to ISO 3166-1 standard).
```

```
        </xsd:documentation>
      </xsd:annotation>
      <xsd:restriction base="xsd:string">
        <xsd:pattern value="[A-Z][A-Z]"/>
      </xsd:restriction>
    </xsd:simpleType>


    <xsd:simpleType name="CountryOfBirthType">
      <xsd:annotation>
        <xsd:documentation>
          Country of birth of the natural person (Two-letter country code
according to ISO 3166-1 standard).
        </xsd:documentation>
      </xsd:annotation>
      <xsd:restriction base="xsd:string">
        <xsd:pattern value="[A-Z][A-Z]"/>
      </xsd:restriction>
    </xsd:simpleType>


    <xsd:simpleType name="CountryOfResidenceType">
      <xsd:annotation>
        <xsd:documentation>
          Country of residence of the natural person (Two-letter country code
according to ISO 3166-1 standard).
        </xsd:documentation>
      </xsd:annotation>
      <xsd:restriction base="xsd:string">
        <xsd:pattern value="[A-Z][A-Z]"/>
      </xsd:restriction>
    </xsd:simpleType>

</xsd:schema>
```

Figure 1: Schema for natural persons

2.2.3.   Unique Identifier (mandatory)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/PersonIdentifier

SAML Attribute FriendlyName: PersonIdentifier

```
<saml:Attribute
      FriendlyName="PersonIdentifier"
      Name="http://eidas.europa.eu/attributes/naturalperson/PersonIdentifier"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:PersonIdentifierType">
           ES/AT/02635542Y
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 2: example PersonIdentifier attribute value

The unique identifier consists of:

1. The first part is the Nationality Code of the identifier

   o This is one of the ISO 3166-1 alpha-2 codes or *"EL"* for Greece[1], followed by a slash ("/"))

2. The second part is the Nationality Code of the destination country or international organization[2]

   o This is one of the ISO 3166-1 alpha-2 codes or *"EL"* for Greece, followed by a slash ("/")

3. The third part a combination of readable characters

   o This uniquely identifies the identity asserted in the country of origin but does not necessarily reveal any discernible correspondence with the subject's actual identifier (for example, username, fiscal number etc)

Example: ES/AT/02635542Y (Spanish eIDNumber for an Austrian SP)

See section 2.5 Unique Identifier Usage for information regarding the rules for creation and characteristics of these identifiers.

2.2.4. Current Family Name(s) (mandatory)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/CurrentFamilyName

SAML Attribute FriendlyName: FamilyName

---

[1] *In case of Greece, the value of the Nationality Code MUST be "EL" instead of "GR" defined in ISO 3166-1.*
[2] „e.g. ‚EU' for European Institutions; ‚EU' has been exceptionally reserved by ISO 3166"

```
<saml:Attribute
      FriendlyName="FamilyName"
      Name="
http://eidas.europa.eu/attributes/naturalperson/CurrentFamilyName"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:CurrentFamilyNameType">
            Chalk
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 3: example CurrentFamilyName attribute value

2.2.5. Current First Name(s) (mandatory)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/CurrentGivenName

SAML Attribute FriendlyName: FirstName

```
<saml:Attribute
      FriendlyName="FirstName"
      Name="
http://eidas.europa.eu/attributes/naturalperson/CurrentGivenName"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:CurrentGivenNameType">
            Sarah
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 4: example CurrentGivenName attribute value

2.2.6. Date of Birth (mandatory)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/DateOfBirth

SAML Attribute FriendlyName: DateOfBirth

```
<saml:Attribute
      FriendlyName="DateOfBirth"
      Name=" http://eidas.europa.eu/attributes/naturalperson/DateOfBirth"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:DateOfBirthType">
            1970-05-28
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 5: example DateOfBirth attribute value

Date of Birth includes a date using the following format: YYYY + "-" + MM + "-" + DD (as defined for xsd:date)

- YYYY indicates a four-digit year, 0000 through 9999.

- MM indicates a two-digit month of the year, 01 through 12.

- DD indicates a two-digit day of that month, 01 through 31.

2.2.7. First name(s) and family name(s) at birth (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/BirthName

SAML Attribute FriendlyName: BirthName

```
<saml:Attribute
      FriendlyName="BirthName"
      Name=" http://eidas.europa.eu/attributes/naturalperson/BirthName"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:BirthNameType">
            Sarah Jane Booth
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 6: example BirthName attribute value

First name(s) and family name(s) at birth are described as a single text value in line with the Core Person Vocabulary.

2.2.8. Place of Birth (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/PlaceOfBirth

SAML Attribute FriendlyName: PlaceOfBirth

```
<saml:Attribute
       FriendlyName="PlaceOfBirth"
       Name=" http://eidas.europa.eu/attributes/naturalperson/PlaceOfBirth"
       NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
       <saml:AttributeValue xsi:type="eidas:PlaceOfBirthType">
              Peterborough
       </saml:AttributeValue>
</saml:Attribute>
```

Figure 7: example PlaceOfBirth attribute value

2.2.9. Current Address (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/CurrentAddress

SAML Attribute FriendlyName: CurrentAddress

```
<saml:Attribute
       FriendlyName="CurrentAddress"
       Name=" http://eidas.europa.eu/attributes/naturalperson/CurrentAddress"
       NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
       <saml:AttributeValue xsi:type="eidas:CurrentAddressType">
PGVpZGFzOkxvY2F0b3JEZXNpZ25hdG9yPjIyPC9laWRhczpMb2NhdG9yRGVzaWduYXRvcj48ZWlkY
XM6VGhvcm91Z2hmYXJlPkFyY2FjaWEgQXZlbnVlPC9laWRhczpUaG9yb3VnaGZhcmU+DQo8ZWlkYX
M6UG9zdE5hbWU+TG9uZG9uPC9laWRhczpQb3N0TmFtZT4NCjxlaWRhczpQb3N0Q29kZT5TVzFBIDF
BQTwvZWlkYXM6UG9zdENvZGU+
       </saml:AttributeValue>
</saml:Attribute>
```

Figure 8: example CurrentAddress attribute value (address data base64 encoded)

This attribute describes the current address for the natural person as registered with the MS authority. Address data is structured by nature and is defined in the attribute schema as a structured XML sequence of xsd:string elements. Where appropriate this structure address data follows the Core ISA Vocabulary type CvAddressType although this has been simplified to a sequence of xsd:string elements.

To enable this data to be passed in a single attribute value this data MUST first be base64 encoded as described in section 2.2.3 Responding Attributes, of the eIDAS Message Format specification.

For reference the un-encoded address data can be seen in the following XML snippet.

```
<eidas:LocatorDesignator>22</eidas:LocatorDesignator>
<eidas:Thoroughfare>Arcacia Avenue</eidas:Thoroughfare>
<eidas:PostName>London</eidas:PostName>
<eidas:PostCode>SW1A 1AA</eidas:Postcode>
```

Figure 9: Address data before encoding to base64

2.2.10. Gender (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/Gender

SAML Attribute FriendlyName: Gender

```
<saml:Attribute
      FriendlyName="Gender"
      Name=" http://eidas.europa.eu/attributes/naturalperson/Gender"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:GenderType">
           Female
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 10: example Gender attribute value

Values for Gender attributes MUST be one of the following:

- Male

- Female

- Unspecified

2.2.11. Nationality (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/Nationality

SAML Attribute FriendlyName: Nationality

```
<saml:Attribute
      FriendlyName="Nationality"
      Name="http://eidas.europa.eu/attributes/naturalperson/Nationality"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:NationalityType">
            LU
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 11: Example of Nationality attribute value

The attribute Nationality represents the nationality of a natural person and is described as an ISO 3166-1 alpha-2 country code or *"EL"* for Greece[3]. Multiple AttributeValues of this attribute are allowed.

Example: LU (Value for a person with Luxembourgish nationality).

2.2.12. CountryOfBirth (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/CountryOfBirth

SAML Attribute FriendlyName: CountryOfBirth

```
<saml:Attribute
      FriendlyName="CountryOfBirth"
      Name="http://eidas.europa.eu/attributes/naturalperson/CountryOfBirth"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:CountryOfBirthType">
            FR
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 12: example of CountryOfBirth attribute value

The attribute CountryOfBirth represents the country where a natural person was born.

The CountryOfBirth is described as an ISO 3166-1 alpha-2 country code or *"EL"* for Greece.

Example: FR (Value for a person born in France).

2.2.13. TownOfBirth (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/TownOfBirth

SAML Attribute FriendlyName: TownOfBirth

---

[3] [3] *In case of Greece, the value of the Nationality Code MUST be "EL" instead of "GR" defined in ISO 3166-1.*

```
<saml:Attribute
      FriendlyName="TownOfBirth"
      Name="http://eidas.europa.eu/attributes/naturalperson/TownOfBirth"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue>
            Paris
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 13: example of TownOfBirth attribute value

The attribute TownOfBirth represents the local administrative unit where a natural person was born. For example, this attribute could represent a town, a city or a locality.

The TownOfBirth is described as a string element.

Example: Paris (Value for a person born in the city of Paris).

2.2.14. CountryOfResidence (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/CountryOfResidence

SAML Attribute FriendlyName: CountryOfResidence

```
<saml:Attribute
      FriendlyName="CountryOfResidence"
      Name="http://eidas.europa.eu/attributes/naturalperson/CountryOfResiden
ce"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:CountryOfResidenceType">
            BE
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 14: example of CountryOfResidence attribute value

The attribute CountryOfResidence represents the country of the legal address of a natural person.

The CountryOfResidence is described as an ISO 3166-1 alpha-2 country code or *"EL"* for Greece[4].

Example: BE (Value for a person residing in Belgium).

2.2.15. PhoneNumber (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/PhoneNumber

SAML Attribute FriendlyName: PhoneNumber

---

[4] *4 In case of Greece, the value of the Nationality* Code *MUST be "EL" instead of "GR" defined in ISO 3166-1.*

```
<saml:Attribute
      FriendlyName="PhoneNumber"
      Name="http://eidas.europa.eu/attributes/naturalperson/PhoneNumber"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue>
            +34912739000
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 15: example of PhoneNumber attribute value

Contact phone number (preferably a mobile phone number) including the international prefix, MUST be defined as described in [ITU-E.164] recommendations.

Example: +34912739000 (Value for a natural person with a phone number from ES).

2.2.16. EmailAddress (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/naturalperson/EmailAddress

SAML Attribute FriendlyName: EmailAddress

```
<saml:Attribute
      FriendlyName="EmailAddress"
      Name="http://eidas.europa.eu/attributes/naturalperson/EmailAddress"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue>
            john.doe@mail.com
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 16: example of EmailAddress attribute value

Contact email address as described in [RFC2821] (section 2.3.10), [RFC2822] (section 3.4.1) and [RFC3696] (section 3).

Example: john.doe@mail.com (Value for a natural person with email address john.doe@mail.com)

2.3. ATTRIBUTES FOR LEGAL PERSONS

2.3.1. Mapping eIDAS minimum data set for Legal Persons to Core ISA Vocabulary

The ISA Core Vocabulary describes a highly structured way of encoding person data that is not ideal for message creation or processing with SAML. The approach taken in this profile is to adopt the base type specified by ISA Core Vocabulary rather than the complex data types required for full compatibility with the standard.

The following Mandatory attributes are required by the Regulation.

Attribute (Friendly) Name	eIDAS MDS Attribute	ISA Core Vocab Equivalent	Notes
LegalName	Current Legal Name	cvb:LegalName	Encoded as xsd:string
LegalPersonIdentifier	Uniquenes Identifier	cva:Cvidentifier	Encoded as xsd:string

The following Optional attributes MAY be supplied by a MS if available and acceptable to national law.

Attribute (Friendly) Name	eIDAS MDS Attribute	ISA Core Vocab Equivalent	Notes
LegalAddress	Current Address	cva:Cvaddress	Encoded as multiple xsd:string elements
VATRegistration	VAT Registration Number	cva:CvbusinessCode	Encoded as xsd:string
TaxReference	Tax Reference Number	cva:CvbusinessCode	Encoded as xsd:string
BusinessCodes	Directive 2012/17/EU Identifier	cva:CvbusinessCode	Encoded as xsd:string
LEI	Legal Entity Identifier (LEI)	cva:CvbusinessCode	Encoded as xsd:string
EORI	Economic Operator Registration and Identification (EORI)	cva:CvbusinessCode	Encoded as xsd:string
SEED	System for Exchange of Excise Data (SEED)	cva:CvbusinessCode	Encoded as xsd:string
SIC	Standard Industrial Classification (SIC)	cva:CvbusinessCode	Encoded as xsd:string
LegalPhoneNumber	LegalPhoneNumber	cbc:Telephone	Encoded as a xsd:string element
LegalEmailAddress	LegalEmailAddress	cbc:ElectronicMail	Encoded as a xsd:string element

2.3.2. Attribute Schema

The following attribute schema is based, where applicable, on the definition of Core Business the minimum set of classes and properties for description of a legal entity according to the ISA Core Vocabulary

(https://joinup.ec.europa.eu/asset/core_business/asset_release/core-business-vocabulary).

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema
      xmlns="http://eidas.europa.eu/attributes/legalperson"
      xmlns:xsd="http://www.w3.org/2001/XMLSchema"
      targetNamespace="http://eidas.europa.eu/attributes/legalperson"
      elementFormDefault="qualified"
      attributeFormDefault="unqualified"
      version="1">

      <xsd:attribute name="LatinScript" type="xsd:boolean" default="true"/>

      <!--
            Mandatory attribute types for a legal person.
      -->
    <xsd:element name="LegalPersonIdentifier"
                  type="eidas:LegalPersonIdentifierType"/>
    <xsd:element name="LegalName" type="eidas:LegalNameType"/>

    <xsd:simpleType name="LegalPersonIdentifierType">
      <xsd:annotation>
        <xsd:documentation>
          Unique identifier for the legal person as defined by the eIDAS
Regulation.
        </xsd:documentation>
      </xsd:annotation>
      <xsd:restriction base="xsd:string"/>
    </xsd:simpleType>

    <xsd:complexType name="LegalNameType">
      <xsd:annotation>
        <xsd:documentation>
          Current legal name for the legal person or organisation.
        </xsd:documentation>
      </xsd:annotation>
      <xsd:simpleContent>
        <xsd:extension base="xsd:string">
          <xsd:attribute ref="LatinScript"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>

      <!--
            Optional attribute types for a legal person.
      -->
    <xsd:element name="LegalAddress" type="eidas:LegalPersonAddressType"
                  minOccurs="0"/>
    <xsd:element name="VATRegistration" type="eidas:VATRegistrationNumberType"
                  minOccurs="0"/>
    <xsd:element name="TaxReference" type="eidas:TaxReferenceType"
                  minOccurs="0"/>
    <xsd:element name="BusinessCodes" type="eidas: D-2012-17-EUIdentifierType"
                  minOccurs="0"/>
    <xsd:element name="LEI" type="eidas:LEIType" minOccurs="0"/>
    <xsd:element name="EORI" type="eidas:EORIType" minOccurs="0"/>
    <xsd:element name="SEED" type="eidas:SEEDType" minOccurs="0"/>
    <xsd:element name="SIC" type="eidas:SICType" minOccurs="0"/>
    <xsd:element name="LegalPhoneNumber" type="xs:string" minOccurs="0"/>
    <xsd:element name="LegalEmailAddress" type="xs:string" minOccurs="0"/>
```

```xml
<xsd:complexType name="LegalPersonAddressStructuredType">
    <xsd:annotation>
        <xsd:documentation>
            The address the legal person has registered with the MS
authority or operating address if not registered. For a company this should be
the registered address within the MS issuing the eID.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
        <xsd:element name="PoBox" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
        <xsd:element name="LocatorDesignator" type="xsd:string"
minOccurs="0" maxOccurs="1"/>
        <xsd:element name="LocatorName" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
        <xsd:element name="CvaddressArea" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
        <xsd:element name="Thoroughfare" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
        <xsd:element name="PostName" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
        <xsd:element name="AdminunitFirstline" type="xsd:string"
minOccurs="0" maxOccurs="1"/>
        <xsd:element name="AdminunitSecondline" type="xsd:string"
minOccurs="0" maxOccurs="1"/>
        <xsd:element name="PostCode" type="xsd:string" minOccurs="0"
maxOccurs="1"/>
    </xsd:sequence>
</xsd:complexType>

<xsd:simpleType name="LegalPersonAddressType">
    <xsd:annotation>
        <xsd:documentation>
            The address the legal person has registered with the MS
authority or operating address if not registered. For a company this should be
the registered address within the MS issuing the eID as a base64 encoded string.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:restriction base="xsd:string"/>
</xsd:simpleType>

<xsd:simpleType name="VATRegistrationNumberType">
    <xsd:annotation>
        <xsd:documentation>VAT - VAT registration number
        </xsd:documentation>
    </xsd:annotation>
    <xsd:restriction base="xsd:string"/>
</xsd:simpleType>

<xsd:simpleType name="TaxReferenceType">
    <xsd:annotation>
        <xsd:documentation>TAX-Ref - tax reference number
        </xsd:documentation>
    </xsd:annotation>
    <xsd:restriction base="xsd:string"/>
</xsd:simpleType>

<xsd:simpleType name="D-2012-17-EUIdentifierType">
    <xsd:annotation>
```

```
            <xsd:documentation>D-2012/17/EU - the identifier used under
Directive 2012/17/EU
            </xsd:documentation>
        </xsd:annotation>
        <xsd:restriction base="xsd:string"/>
    </xsd:simpleType>

    <xsd:simpleType name="LEIType">
        <xsd:annotation>
            <xsd:documentation>LEI - Legal Entity Identifier
            </xsd:documentation>
        </xsd:annotation>
        <xsd:restriction base="xsd:string"/>
    </xsd:simpleType>

    <xsd:simpleType name="EORIType">
        <xsd:annotation>
            <xsd:documentation>EORI - Economic Operator Registration and
Identification
            </xsd:documentation>
        </xsd:annotation>
        <xsd:restriction base="xsd:string"/>
    </xsd:simpleType>

    <xsd:simpleType name="SEEDType">
        <xsd:annotation>
            <xsd:documentation>SEED - System for Exchange of Excise Data
            </xsd:documentation>
        </xsd:annotation>
        <xsd:restriction base="xsd:string"/>
    </xsd:simpleType>

    <xsd:simpleType name="SICType">
        <xsd:annotation>
            <xsd:documentation>SIC - Standard Industrial Classification
            </xsd:documentation>
        </xsd:annotation>
        <xsd:restriction base="xsd:string"/>
    </xsd:simpleType>

</xsd:schema>
```

Figure 17: Schema for legal persons

2.3.3. Unique Identifier (mandatory)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/LegalPersonIdentifier

SAML Attribute FriendlyName: LegalPersonIdentifier

```
<saml:Attribute
      FriendlyName="LegalPersonIdentifier"
      Name="
http://eidas.europa.eu/attributes/legalperson/LegalPersonIdentifier"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas: LegalPersonIdentifierType">
            ES/AT/02735442Z
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 18: example LegalPersonIdentifier attribute value

Attribute describing a unique identifier for the legal person identity.

See section 2.5 Unique Identifier Usage for information regarding the rules for creation and characteristics of these identifiers.

2.3.4. Legal Name (mandatory)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/LegalName

SAML Attribute FriendlyName: LegalName

```
<saml:Attribute
      FriendlyName="LegalName"
      Name=" http://eidas.europa.eu/attributes/legalperson/LegalName"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas: LegalNameType">
            Acme Corporation
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 19: example LegalName attribute value

Attribute describing the legal name for the legal person authenticating.

2.3.5. Legal Address (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/LegalPersonAddress

SAML Attribute FriendlyName: LegalAddress

```
<saml:Attribute

      FriendlyName="LegalAddress"

      Name="
http://eidas.europa.eu/attributes/legalperson/LegalPersonAddress"

      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">

      <saml:AttributeValue xsi:type="eidas:
LegalPersonAddressType">PGVpZGFzOkxvY2F0b3JEZXNpZ25hdG9yPjEyNTwvZWlkYXM6TG9jY
XRvckRlc2lnbmF0b3I+DQo8ZWlkYXM6VGhvcm91Z2hmYXJlPktpbmdzd2F5PC9laWRhczpUaG9yb3
VnaGZhcmU+DQo8ZWlkYXM6UG9zdE5hbWU+TG9uZG9uPC9laWRhczpQb3N0TmFtZT4gDQo8ZWlkYXM
6UG9zdENvZGU+V0MyQiA2Tkg8L2VpZGFzOlBvc3Rjb2RlPg==

      </saml:AttributeValue>

</saml:Attribute>
```

Figure 20: example LegalPersonAddress attribute value (address data base64 encoded)

This attribute describes the address the legal person has registered with the MS authority or operating address if not registered. For a company this should be the registered address within the MS issuing the eID.

Address data is structured by nature and is defined in the attribute schema as a structured XML sequence of xsd:string elements. Where appropriate this structure address data follows the Core ISA Vocabulary type CvAddressType although this has been simplified to a sequence of xsd:string elements.

To enable this data to be passed in a single attribute value this data MUST first be base64 encoded as described in section 2.2.3 Responding Attributes, of the eIDAS Message Format specification.

For reference the un-encoded address data can be seen in the following XML snippet.

```
<eidas:LocatorDesignator>125</eidas:LocatorDesignator>

<eidas:Thoroughfare>Kingsway</eidas:Thoroughfare>

<eidas:PostName>London</eidas:PostName>

<eidas:PostCode>WC2B 6NH</eidas:Postcode>
```

Figure 21: Address data before encoding to base64

2.3.6. VAT Registration Number (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/VATRegistrationNumber

SAML Attribute FriendlyName: VATRegistration

```
<saml:Attribute
      FriendlyName="VATRegistration"
      Name="
http://eidas.europa.eu/attributes/legalperson/VATRegistrationNumber"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas: VATRegistrationNumberType">GB 730
7577 27</saml:AttributeValue>
</saml:Attribute>
```

Figure 22: example VATRegistrationNumber attribute value.

Attribute describing the VAT registration number for the organisation.

2.3.7. Tax Reference Number (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/TaxReference

SAML Attribute FriendlyName: TaxReference

```
<saml:Attribute
      FriendlyName="TaxReference"
      Name=" http://eidas.europa.eu/attributes/legalperson/TaxReference"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:TaxReferenceType">
            ABZ1230789
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 23: example TaxReference attribute value.

Attribute describing the Tax Reference number related to the legal person.

2.3.8. Directive 2012/17/EU Identifier (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/D-2012-17-EUIdentifier

SAML Attribute FriendlyName: D-2012-17-EUIdentifier

```
<saml:Attribute

      FriendlyName="D-2012-17-EUIdentifier"

      Name=" http://eidas.europa.eu/attributes/legalperson/D-2012-17-
EUIdentifier"

      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">

      <saml:AttributeValue xsi:type="eidas:D-2012-17-EUIdentifierType">

            GB 755 267 1243

      </saml:AttributeValue>

</saml:Attribute>
```

Figure 24: example D–2012–17–EUIdentifier attribute value.

Attribute describing the identifier referred to in Article 3(1) of Directive 2009/101/EC of the European Parliament and of the Council.

Further information regarding this identifier can be found in Directive 2009/101/EC of the European Parliament and of the Council of 16 September 2009 on coordination of safeguards which, for the protection of the interests of members and third parties, are required by Member States of companies within the meaning of the second paragraph of Article 48 of the Treaty, with a view to making such safeguards equivalent (OJ L 258, 1.10.2009, p. 11).

2.3.9. Legal Entity Identifier (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/LEI

SAML Attribute FriendlyName: LEI

```
<saml:Attribute

      FriendlyName="LEI"

      Name=" http://eidas.europa.eu/attributes/legalperson/LEI"

      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">

      <saml:AttributeValue xsi:type="eidas:LEIType">

            ES123567983568437254K

      </saml:AttributeValue>

</saml:Attribute>
```

Figure 25: example LEI attribute value

Attribute describing the Legal Entity Identifier (LEI) referred to in Commission Implementing Regulation (EU) No 1247/2012 of 19 December 2012 laying down implementing technical standards with regard to the format and frequency of trade reports to trade repositories according to Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories (OJ L 352,

21.12.2012, p. 20).

2.3.10. Economic Operator Registration and Identification (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/EORI

SAML Attribute FriendlyName: EORI

```
<saml:Attribute
      FriendlyName="EORI"
      Name=" http://eidas.europa.eu/attributes/legalperson/EORI"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:EORIType">
            GB123456789000
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 26: example EORI attribute value

Attribute describing the Economic Operator Registration and Identification (EORI) for the legal person as referred to in Commission Implementing Regulation (EU) No 1352/2013.

Further information regarding Economic Operator Registration and Identification (EORI) can be found in Commission Implementing Regulation (EU) No 1352/2013 of 4 December 2013 establishing the forms provided for in Regulation (EU) No 608/2013 of the European Parliament and of the Council concerning customs enforcement of intellectual property rights (OJ L 341, 18.12.2013, p. 10).

2.3.11. System for Exchange of Excise Data Identifier (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/SEED

SAML Attribute FriendlyName: SEED

```
<saml:Attribute
      FriendlyName="SEED"
      Name=" http://eidas.europa.eu/attributes/legalperson/SEED"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:SEEDType">
            GB 00000987ABC
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 27: example SEED attribute value

Attribute describing the System for Exchange of Excise Data (SEED) Excise Number for the legal person.

Further information regarding the SEED identifier can be found in Council Directive 92/12/EEC of 25 February 1992 on the general arrangements for products subject to excise duty and on the holding, movement and monitoring of such products (OJ L 076, 23/03/1992 p. 1 – 13).

2.3.12. Standard Industrial Classification (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/SIC

SAML Attribute FriendlyName: SIC

```
<saml:Attribute
      FriendlyName="SIC"
      Name=" http://eidas.europa.eu/attributes/legalperson/SIC"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:SICType">
            3730
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 28: example attribute element based on SIC

Attribute describing the Standard Industrial Classification (SIC) code for the legal person.

2.3.13. LegalPhoneNumber (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/LegalPhoneNumber

SAML Attribute FriendlyName: LegalPhoneNumber

```
<saml:Attribute
      FriendlyName="LegalPhoneNumber"
      Name="http://eidas.europa.eu/attributes/legalperson/LegalPhoneNumber"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:LegalPhoneNumber">
            +34912739001
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 29: example of LegalPhoneNumber attribute value

Contact phone number (preferably a mobile phone number) including the international prefix, following the

recommendations in [ITU-E.164].

Example: +34912739001 (Value for a legal person with a phone number from ES).

2.3.14. LegalEmailAddress (Optional)

SAML Attribute Name: http://eidas.europa.eu/attributes/legalperson/LegalEmailAddress

SAML Attribute FriendlyName: LegalEmailAddress

```
<saml:Attribute
      FriendlyName="LegalEmailAddress"
      Name="http://eidas.europa.eu/attributes/legalperson/LegalEmailAddress"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:LegalEmailAddress">
            john.doe@legal.mail.com
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 30: example of LegalEmailAddress attribute value

Contact email address as described in [RFC2821] (section 2.3.10), [RFC2822] (section 3.4.1) and [RFC3696] (section 3).

Example: john.doe@legal.mail.com (Value for a legal person with email address john.doe@legal.mail.com).

2.4. TRANSLITERATION

Transliteration allows the consumer of identity assertions to determine which attribute values are recorded in Latin and non-Latin script.

Transliteration is optional for all attribute values. Transliterated attribute values should only be provided where transliteration is ambiguous.

If transliteration is unambiguous, (e.g. it follows ISO 9 for transliterating Cyrillic to Latin), then the transliterated value MAY be generated by the consumer of the identity assertion on receipt of the assertion. In this case there is no requirement for a transliterated attribute value to be provided in the attribute assertion from the sending Node.

If transliteration is ambiguous then the transliterated attribute value MUST be provided by an authoritative source (if there is one) and cannot be generated by the Node.

Nodes are not responsible for creating these transliterated attribute values, as they MUST be provided by an authoritative source for the attribute value in question.

For attribute values where transliteration is applicable (as defined by the profile) a modifying attribute `LatinScript="false"` MUST be applied to the `<AttributeValue>`. This `LatinScript` attribute is optional and set to "`true`" by default.

To facilitate transliteration two `<AttributeValue>` statements MUST be included in the `<Attribute>` statement;

1. a Latin script variant of the attribute value

2. a non-Latin script variant which MUST be clearly identified using the `LatinScript` attribute set to "`false`".

If a transliterated attribute value is included the `LatinScript` attribute MUST be set to `false` indicating a non-latin variant of the attribute value. Nodes MUST take account of the `LatinScript` attribute where present and act accordingly.

In the following example a FamilyName attribute value is provided in the original Greek and transliterated versions.

```
<saml:Attribute
      FriendlyName="FamilyName"
      Name="
http://eidas.europa.eu/attributes/naturalperson/CurrentFamilyName"
      NameFormat="urn:oasis:names:tc:SAML:2.0:attrname-format:uri">
      <saml:AttributeValue xsi:type="eidas:CurrentFamilyNameType">
            Onasis
      </saml:AttributeValue>


      <saml:AttributeValue LatinScript="false"
xsi:type="eidas:CurrentFamilyNameType">
            Ωνάσης
      </saml:AttributeValue>
</saml:Attribute>
```

Figure 31: example attribute element based on FamilyName including Latin and non-Latin attribute value.

2.5. UNIQUE IDENTIFIER USAGE

It is the responsibility of the operating or commissioning Member State to determine how a Unique Identifier is created.

As a baseline requirement the Unique Identifier should not include elements that directly identify the Principal. This follows the requirement for a persistent name identifier in SAML-CORE-2.0, which states that persistent identifiers "*MUST be constructed using pseudo-random values that have no discernible correspondence with the subject's actual identifier (for example, username).*"

Hashing of Unique Identifiers is permitted although this is not mandated for eIDAS.

The Unique Identifier MUST NOT contain any whitespace.

The Unique Identifier MUST NOT exceed a total of 256 characters.

2.5.1. Unique Identifier Stability

The Unique Identifier shall remain unchanged for the lifetime of the account (as created by the underlying scheme or generated by the sending Node). A Unique Identifier shall never be reused, e.g. a new Unique Identifier shall not match a Unique Identifier that has been deleted.

Any service that consumes assertions of identity must assume that the Unique Identifier presented for a particular person may change over time e.g. where the user's digital identity is replaced or repaired. This should be handled by a consuming service using the same matching process as used when an identity is first encountered utilising the Minimum Data Set to identify the Principal within the service.

2.6. DISPLAYING RAW ATTRIBUTE DATA VALUES

Member States may wish to implement a user experience that includes the disclosure of attribute data to be asserted e.g. for the purpose of consent. In some cases complex attribute data, such as Current Address (see 2.2.9), will be base64 encoded when transmitted as part of a SAML Assertion.

Relying parties wishing to display these structured values should so with reference to the attribute specifications. For examples see, 2.2.9 Current Address and the example encoded and decoded attribute value.

Guidance and example code related to the display of base64 encoded attribute values may be included in subsequent guidance but is not included in this specification.

2.7. SECTOR SPECIFIC ATTRIBUTES

This specification is concerned with the minimum data set attributes as described in the legal text of the eIDAS Regulation. Where additional sector specific attributes are required Member States and domain experts are invited to develop additional attribute schema describing the type and usage of these attributes for inclusion in Member State eIDAS Node metadata.

General principles for the development of domain specific attribute schema:

1. Observe the principle of data minimisation where possible

2. Avoid complex data structures

3. Clearly define requirements for transliteration

4. Cross-check with existing eIDAS attribute schema to avoid duplication of attribute types

5. Prior to publication of a new attribute schema the CEF eIDAS Technical Subgroup should be consulted for

opinion its role as the technical authority for eIDAS architecture.

2.8. NATURAL AND LEGAL PERSON REPRESENTATIVE

The eIDAS Regulation allows for representation of persons as described in Article 3 (1), which explicitly states this as "a natural person representing a legal person". In practice this representation is not limited to this scenario but may also include other representation such as a natural person representing another natural person. This has been elaborated on in the eIDAS Cooperation Network where the European Commission presented "… *the idea of covering all scenarios of representation*." The Cooperation Network discussed whether the scope and limitations of representation, like limited powers of representation or restriction to certain actions, should already be covered. The conclusion was that such limitations should not yet be included in the attributes and that "… *the scope and limitation should be covered by separate documents or processes*". The European Commission "… *confirmed there was a legal basis stemming from the implementing decision*." (quotes taken from the minutes of the 3rd eIDAS Cooperation Network meeting June 20th, 2016) and the technical subgroup was asked to amend the specification to cover all scenarios of a natural persons or a legal persons representing another natural person or a legal person.

In order to express representation in the MDS it is necessary to include an additional person data set that indicates a representative.

The representative attributes MUST NOT be explicitly requested in the eIDAS Authentication request. The eIDAS service MAY return one representative attribute set in case of representation.

The representative attribute MUST be present in addition to the attribute set of the represented person, i.e. in representation cases always 2 sets of MDS attribute are transmitted; The requested attributes of the represented natural person (section 2.2) or the represented legal person (section 2,3) AND the attributes of the representative prefixed with "`Representative`".

The representative attributes follow the specifications for natural persons as defined in sections 2.2 Attributes for Natural Persons, and 2.3 Attributes for Legal Persons, except for adding a Prefix "Representative" to the attribute's FriendlyName element and by amending the SAML attribute name by "representative". The name prefixes are thus http://eidas.europa.eu/attributes/naturalperson/representative/ or http://eidas.europa.eu/attributes/legalperson/representative/.

Application note: Member States or Relying Parties might not support representation in their services, e.g. if the concept of electronic representation does not exist. The MS specific part of the eIDAS Connector should reject responses containing representative attributes in such cases to prevent Relying Parties falsely assuming that the represented person is acting on her own behalf.

The following example illustrates a `RepresentativeFamilyName` attribute and a `RepresentativePersonIdentifier` attribute, which contains the `FamilyName` and the

`PersonalIdentifier` of a natural person representative. All other attributes of the eIDAS Attribute Profile may be modified in a similar way.

```
<saml:Attribute
        FriendlyName="RepresentativePersonIdentifier"
        Name=
http://eidas.europa.eu/attributes/naturalperson/representative/PersonIdentifi
er
        NameFormat=
"urn:oasis:names:tc:SAML:2.0:attrnameformat:uri">


        <saml:AttributeValue xsi:type="eidas:PersonIdentifierType">
                ES/AT/02635542Y
        </saml:AttributeValue>
</saml:Attribute>


<saml:Attribute
        FriendlyName="RepresentativeFamilyName"
        Name="
http://eidas.europa.eu/attributes/naturalperson/representative/CurrentFamilyN
ame"
        NameFormat=
"urn:oasis:names:tc:SAML:2.0:attrnameformat:uri">


        <saml:AttributeValue xsi:type="eidas:CurrentFamilyNameType">
                Chalk
        </saml:AttributeValue>
</saml:Attribute>
```

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