



## Attribute definitions for individual data

## Introduction

These schema definitions are intended to facilitate information exchange among European, and possibly international, academic and research institutions.

In its current version, the SCHAC schemas are not oriented to any particular technology. They define a set of attributes to describe individuals in the academic and research institutions. Appropriate profiles, at least for LDAP and XML, will be defined in other documents.

These definitions assume that other attributes describing individuals are already available and properly coded, according with the following standards:

- The **eduPerson** schema v. 200312, as defined at <http://www.educause.edu/eduperson/>
- The **person** schema, as defined by X.521 (2001)
- The **organizationalPerson** schema, as defined by X.521 (2001)
- The **inetOrgPerson** schema, as defined by RFC 2798

## Attribute meta-information and notation

For all attributes, the following metadata is defined:

Name	A label used to identify and distinguish one attribute from another
Description	A short description of the attribute
Format	The syntax for the representation of the attribute's values
# of values	<ul style="list-style-type: none"> <li>● Single      Only one value is permitted for describing a given individual</li> <li>● Multi        An indefinite number of values can be used</li> </ul>
References	Additional information used to clarify some properties of attributes like format, description or # of values
Examples	Example of values used within the attribute

## Attributes defined by SCHAC

Name	<b>schacMotherTongue</b>
Description	Is the language a person learns first. Correspondingly, the person is called a native speaker of the language. Usually a child learns the basics of their first language from their family.
Format	<ul style="list-style-type: none"> <li>- ISO 639: 2-letter codes if the code is defined for our language</li> <li>- ISO 639: 3-letter codes if the 2-letter code is not defined</li> <li>- If ISO 639: 3-letter codes is not defined for our language we need to use a code defined in another classification.</li> </ul> <p>All values must be lower case.</p>
# of values	Single
References	<ul style="list-style-type: none"> <li>● <b>ISO 639</b> - Language Codes</li> <li>● <b>RFC 2798</b> - Definition of the inetOrgPerson LDAP Object Class</li> <li>● <b>RFC 3066</b> - Tags for the Identification of Languages</li> </ul>
Examples	schacMotherTongue = fr

Name	<b>schacGender</b>
Description	<p>The state of being male or female. The gender attribute specifies the legal gender of the subject it is associated with.</p> <p>"Either of the two groups that people, animals and plants are divided into according to their function of producing young" (Oxford Advanced Learner's Dictionary)</p>
Format	The letter "m" represents "male" and the letter "f" represents "female"
# of values	Single
References	<ul style="list-style-type: none"> <li>● <b>RFC 2985</b> - PKCS #9: Selected Object Classes and Attribute Types Version 2.0. Sections 5.2.6, B.3.10</li> <li>● <b>ISO 5218</b> - Information interchange -- Representation of human sexes. The standar ISO 5218 defines the representation of the human sexes by a numeric digital code. It was created by the Data Management and Interchange Technical Committee and proposed in November 1976</li> </ul>
Examples	schacGender = f

Name	<b>schacDateOfBirth</b>
Description	The date of birth for the subject it is associated with
Format	Numeric value YYYYMMDD, using 4 digits for year, 2 digits for month and 2 digits for day as described in RFC 3339 'Date and Time on the Internet: Timestamps' as reference using the 'full-date' format from paragraph 5.6 but without the dashes.
# of values	Single
References	<ul style="list-style-type: none"> <li>● <b>RFC 2985</b> - PKCS #9: Selected Object Classes and Attribute Types Version 2.0. Sections 5.2.4, B.3.8</li> <li>● <b>RFC 3339</b> - Date and Time on the Internet: Timestamps. 'Date and Time on the Internet: Timestamps' as reference using the 'full-date' format from paragraph 5.6 but without the dashes</li> <li>● <b>ISO 8601</b> - Data elements and interchange formats - Information interchange - Representation of dates and times</li> </ul>
Examples	schacDateOfBirth = 19660412

Name	<b>schacPlaceOfBirth</b>
Description	The schacPlaceOfBirth attribute specifies the place of birth for the subject it is associated with.
Format	Free string
# of values	Single
References	<ul style="list-style-type: none"> <li>● <b>RFC 2985</b> - PKCS #9: Selected Object Classes and Attribute Types Version 2.0. Sections 5.2.5, B.3.9</li> </ul>
Examples	schacPlaceOfBirth = Algeciras, Spain

Name	<b>schacCountryOfCitizenship</b>
Description	The schacCountryOfCitizenship attribute specifies the (claimed) countries of citizenship for the subject it is associated with.
Format	Two-letter country acronym in accordance with ISO 3166. All values must be lower case.
# of values	Multi
References	<ul style="list-style-type: none"> <li>● <b>RFC 2985</b> - PKCS #9: Selected Object Classes and Attribute Types Version 2.0. Sections 5.2.7, B.3.11</li> <li>● <b>ISO 3166</b> - Codes for the representation of names of countries and their subdivisions</li> </ul>
Examples	schacCountryOfCitizenship = es

Name	<b>schacCountryOfResidence</b>
Description	The schacCountryOfResidence attribute specifies the (claimed) country of residence for the subject is associated with.
Format	Two-letter country acronym in accordance with ISO 3166 country code identifier. All values must be lower case.
# of values	Multi
References	<ul style="list-style-type: none"> <li>● <b>RFC 2985</b> - PKCS #9: Selected Object Classes and Attribute Types Version 2.0. Sections 5.2.8, B.3.12</li> <li>● <b>ISO 3166</b> - Codes for the representation of names of countries and their subdivisions</li> </ul>
Examples	schacCountryOfResidence = es

Name	<b>schacHomeOrganization</b>
Description	Specifies a person's home organization using the domain name of the organization
Format	Domain name according to RFC 1035. All values must be lower case.
# of values	Single
References	● <b>RFC 1035</b> - Domain names - implementation and specification
Examples	schacHomeOrganization = terena.nl

Name	<b>schacHomeOrganizationType</b>
Description	Type of a Home Organization
Format	urn:SCHACPREFIX:homeOrgType:<country-code>:<string> <ul style="list-style-type: none"> <li>● The &lt;country-code&gt; must be a valid two-letter ISO 3166 country code identifier.</li> <li>● &lt;string&gt; from a nationally controlled vocabulary</li> </ul>
# of values	Single
References	● <b>ISO 3166</b> - Codes for the representation of names of countries and their subdivisions
Examples	schacHomeOrganizationType = urn:SCHACPREFIX:homeOrgType:ch:vho schacHomeOrganizationType = urn:SCHACPREFIX:homeOrgType:es:opi

Name	<b>schacSn1</b>
Description	First surname of a person ("the surname" in international terms). schacSn1 would contain whatever values the described person thinks they should contain. Splitting shall be done by humans. That means that, when filling a SCHAC-based description that allows the use of schacSn1 and schacSn2, the administrators must ask for 1st surname and 2nd surname (if applicable) as well as they do for givenName, surname, etc.
Format	Free string
# of values	Multi
Examples	If <i>sn = Lopez de la Moraleda y de Las Altas Alcornias</i> and that person uses <i>Lopez de la Moraleda</i> as the first component of the surname we can write: schacSn1 = Lopez de la Moraleda

Name	<b>schacSn2</b>
Description	Second surname of a person ("the surname" in international terms). schacSn2 would contain whatever values the described person thinks they should contain. Splitting shall be done by humans. That means that, when filling a SCHAC-based description that allows the use of schacSn1 and schacSn2, the administrators must ask for 1st surname and 2nd surname (if applicable) as well as they do for givenName, surname, etc.
Format	Free string
# of values	Multi
Examples	If <i>sn = Lopez de la Moraleda y de Las Altas Alcornias</i> and that person uses <i>de Las Altas Alcornias</i> as the second component of the surname we can write: schacSn2 = de Las Altas Alcornias

Name	<b>schacPersonalUniqueID</b>
Description	Specifies a "legally unique identifier" for The subject it is associated with. This might be DNI in Spain, FIC in Finland, NIN in Sweden,...
Format	urn:SCHACPREFIX:uniqueID:<country-code>:<idType>:<idValue> <ul style="list-style-type: none"> <li>● The &lt;country-code&gt; must be a valid two-letter ISO 3166 country code identifier.</li> <li>● &lt;idType&gt;. Acceptable values must be declared per each country code.</li> <li>● &lt;idValue&gt;</li> </ul>
# of values	Multi
References	<ul style="list-style-type: none"> <li>● <b>ISO 3166</b> - Codes for the representation of names of countries and their subdivisions</li> </ul>
Examples	schacPersonalUniqueID = urn:SCHACPREFIX:uniqueID:es:NIF:31241312L schacPersonalUniqueID = urn:SCHACPREFIX:uniqueID:fi:FIC:260667-123F schacPersonalUniqueID = urn:SCHACPREFIX:uniqueID:se:NIN:12345678

Name	<b>schacUUID</b>
Description	Specifies a "universally unique identifier" for an entity representing a person.
Format	urn:uuid:<UUID> <ul style="list-style-type: none"> <li>● &lt;UUID&gt;. A UUID is essentially a 16-byte number and in its canonical form a UUID may look like this: f81d4fae-7dec-11d0-a765-00a0c91e6bf6. UUID generation requires no central registration process</li> </ul>
# of values	Single
References	● <b>RFC4122</b> - A Universally Unique Identifier (UUID) URN Namespace
Examples	schacUUID = urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bf6

Name	<b>schacPersonalTitle</b>
Description	The Personal Title attribute type specifies a personal title for a person. Examples of personal titles are "Ms", "Dr", "Prof", "Rev", "Sr".
Format	Free format string
# of values	Single
References	● <b>RFC1274</b> - The COSINE and Internet X.500 Schema personal title Sections 9.3.30
Examples	schacPersonalTitle = Prof

Name	<b>schacPersonalPosition</b>
Description	The Personal Position attribute type specifies a personal position inside an institution
Format	urn:SCHACPREFIX:position:<NSS> <NSS> is a Namespace Specific String as defined in RFC 2141
# of values	Multi
References	<ul style="list-style-type: none"> <li>● <b>RFC 2141</b> - URN Syntax</li> <li>● <b>RFC 2256</b> - A Summary of the X.500(96) User Schema for use with LDAPv3. Section: 5.13 title</li> </ul> <p>This attribute contains the title, such as "Vice President", of a person in their organizational context. The "personalTitle" attribute would be used for a person's title independent of their job function.</p>
Examples	schacPersonalPosition = urn:SCHACPREFIX:position:umk.pl:programmer

Name	<b>schacUserPrivateAttribute</b>
Description	Used to model privacy requirements, as expressed by the user and/or the organizational policies. The values are intended to be attribute type names and applies to the attribute and any subtypes of it for a given entity.  In what respects to data exchange, it applies to the expression of privacy requirements.  This attribute can also have specific operational semantics (one has already been applied to LDAP servers: see references below), that will be defined in a separate document.
Format	An attribute type identifier.  Operational semantics may imply specific values as wildcards.
# of values	Multi
References	● <a href="http://www.rediris.es/ldap/doc/irisUserPrivateAttribute/tnc2005-irisUserPrivateAttribute.pdf">http://www.rediris.es/ldap/doc/irisUserPrivateAttribute/tnc2005-irisUserPrivateAttribute.pdf</a>
Examples	● Attributes mail and telephoneNumber are considered private  schacUserPrivateAttribute = mail schacUserPrivateAttribute = telephoneNumber

Name	<b>schacUserPresenceID</b>
Description	To store a set of values related to network presence protocols
Format	urn:SCHACPREFIX:presence:<NSS>  <NSS> is a Namespace Specific String as defined in RFC 2141
# of values	Multi
References	● <b>RFC 2141</b> - URN Syntax
Examples	schacUserPresenceID = urn:SCHACPREFIX:presence:xmpp: <a href="mailto:pepe@im.univx.es">pepe@im.univx.es</a> schacUserPresenceID = urn:SCHACPREFIX:presence:sip: <a href="mailto:pepe@myweb.com">pepe@myweb.com</a> schacUserPresenceID = urn:SCHACPREFIX:presence:sip: <a href="mailto:jose.perez@univx.es">jose.perez@univx.es</a> schacUserPresenceID = urn:SCHACPREFIX:presence:h323: <a href="mailto:pepe@myweb.fi">pepe@myweb.fi</a> :808;pars

Name	<b>schacUserStatus</b>
Description	Used to store a set of status of a person as user of services
Format	urn:SCHACPREFIX:status:<NSS>  ● <NSS> is a Namespace Specific String as defined in RFC 2141
# of values	Multi
References	● <b>RFC 2141</b> - URN Syntax
Examples	● To store different user activity states at University of Málaga (uma.es):  schacUserStaus = urn:SCHACPREFIX:status:uma.es:affiliation:expired schacUserStaus = urn:SCHACPREFIX:status:uma.es:sendMail:expired schacUserStaus = urn:SCHACPREFIX:status:uma.es:getMail:active  ● A parameter in the URN can be used to represent the temporal validity of the satus:  schacUserStatus = urn:SCHACPREFIX:status:ujl.si:webmail:active?ttl=20060531



Name	<b>schacExpiryDate</b>
Description	The date from which the set of data is to be considered invalid (specifically, in what refers to rights and entitlements)
Format	Numeric value YYYYMMDD, using 4 digits for year, 2 digits for month and 2 digits for day as described in RFC 3339 'Date and Time on the Internet: Timestamps' as reference using the 'full-date' format from paragraph 5.6 but without the dashes.
# of values	Single
References	<ul style="list-style-type: none"> <li>● <b>RFC 2985</b> - PKCS #9: Selected Object Classes and Attribute Types Version 2.0. Sections 5.2.4, B.3.8</li> <li>● <b>RFC 3339</b> - Date and Time on the Internet: Timestamps. 'Date and Time on the Internet: Timestamps' as reference using the 'full-date' format from paragraph 5.6 but without the dashes</li> <li>● <b>ISO 8601</b> - Data elements and interchange formats - Information interchange - Representation of dates and times</li> </ul>
Examples	schacExpiryDate = 20051231

## Alphabetical Index of attributes

schacCountryOfCitizenship.....	4	schacPersonalTitle.....	7
schacCountryOfResidence.....	5	schacPersonalUniqueID.....	6
schacDateOfBirth.....	4	schacPlaceOfBirth.....	4
schacExpiryDate.....	9	schacSn1.....	6
schacGender.....	3	schacSn2.....	6
schacHomeOrganization.....	5	schacUserPresenceID.....	8
schacHomeOrganizationType.....	5	schacUserPrivateAttribute.....	8
schacMotherTongue.....	3	schacUserStatus.....	8
schacPersonalPosition.....	7	schacUUID.....	7