

XEP-0154: User Profile

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This document specifies how to represent and manage profile data about IM users and other XMPP entities using the XMPP Data Forms extension.

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1 Introduction

It is widely acknowledged within the Jabber/XMPP community that the vcard-temp (XEP-0054) 1 specification (vcard-temp (XEP-0054) 2) has outlived its usefulness. There are several reasons for this conclusion:

- 1. vcard-temp (XEP-0054) ³ is not fully consistent with the Internet-Draft on which it was
- 2. The Internet-Draft on which it was based was never approved by the IETF.
- 3. Because of confusion over aspects of the vcard-temp specification, there exist incompatible implementations.
- 4. vCard (RFC 2426 4) captures only a limited set of information.
- 5. vCard (even in its XML representation 5) is not easily extensible, leading those who develop profiles for specialized communities to "roll their own" protocols, to the detriment of interoperability.
- 6. vCard data tends to be monolithic (the basic unit of information is the full vCard, not parts thereof).
- 7. The publication model for XEP-0054 is to set the full vCard, rather than only the parts that need to be modified.
- 8. The retrieval model for XEP-0054 is to get the full vCard, rather than only the parts that have been modified.

Given the weaknesses of vCard, there is interest across the broader Internet community in replacing vCard with something more modern and extensible. Unfortunately, no other standards development organization has developed an alternative to vCard. Part of the challenge is that quite detailed ontologies have been developed that might replace parts of the vCard specification (e.g., the Extensible Name and Address Language 7 developed by OASIS 8) while less-formal ontologies are being used to represent other parts of the problem space (e.g., Friend of a Friend (FOAF)⁹). The relevant protocols are in flux and it is unclear when (or even if) stability will emerge.

¹XEP-0054: vcard-temp https://xmpp.org/extensions/xep-0054.html.

²XEP-0054: vcard-temp https://xmpp.org/extensions/xep-0054.html.

³XEP-0054: vcard-temp https://xmpp.org/extensions/xep-0054.html.

⁴RFC 2426: vCard MIME Directory Profile http://tools.ietf.org/html/rfc2426.

⁵For links to the experimental XML representation of vCard, see vcard-temp (XEP-0054) ⁶.

⁷See <http://xml.coverpages.org/xnal.html>.

⁸OASIS is a not-for-profit, international consortium that drives the development, convergence and adoption of e-business standards. For further information, see http://www.oasis-open.org/.

⁹Friend of a Friend (FOAF) http://xmlns.com/foaf/0.1/>.



Because of the unsettled landspace and the strong desire within the Jabber/XMPP community to move beyond XEP-0054, this document specifies methods for the representation of profile data in terms of the Data Forms (XEP-0004) 10 protocol (further qualified using the standardization concepts specified in Field Standardization for Data Forms (XEP-0068) 11) and for the management of profile data using standard IQ request-response semantics as well as, for more frequently-modified data, Publish-Subscribe (XEP-0060) 12 semantics (specifically the simplified subset of those semantics specified in Personal Eventing Protocol (XEP-0163) ¹³). The rationale behind these design decisions is provided below.

2 Requirements

This document addresses the following requirements for data management:

- 1. Enable an entity to publish profile data about itself.
- 2. Enable requesting entities to retrieve profile data about other entities.

This document addresses the following requirements for data representation:

- 1. Specify how to represent profile data in an XMPP-friendly manner for communication over the wire.
- 2. Ensure that the protocol is extensible (e.g., not limited to existing vCard fields). 14
- 3. Where possible, map profile data fields to existing vCard fields and other common formats.

 $^{^{10}\}mbox{XEP-0004:}$ Data Forms https://xmpp.org/extensions/xep-0004.html.

¹¹XEP-0068: Field Data Standardization for Data Forms https://xmpp.org/extensions/xep-0068.html.

 $^{^{12}\}mbox{XEP-0060: Publish-Subscribe} \mbox{<https://xmpp.org/extensions/xep-0060.html>.}$

¹³XEP-0163: Personal Eventing Protocol https://xmpp.org/extensions/xep-0163.html.

¹⁴The extensibility requirement is critically important, because it would be best if the protocol specified herein could be used to represent data used within specialized communities. Examples of such communities include dating services, multiplayer gaming networks, IM services provided by portals and ISPs, and expert-location systems within large corporations. While such communities might use part or all of some common set of data fields (such as fields that map to familiar vCard elements), each community might also want to represent quite disparate kinds of information (dating criteria, favorite games, contact preferences, areas of expertise, and the like). Furthermore, data might be used to profile network actors that are not persons (e.g., bots, services, and other software agents). Therefore, the ideal proposal will provide an extensible framework for representing profile data and will not limit itself to representing the relatively small set of data fields covered by the vCard format.



3 Concepts and Approach

3.1 Data Management

There are several possible approaches to representing profile data for communication over XMPP networks, including the following:

1. IQ (request-and-response) semantics.

In the simplest case, an entity may store its own profile data and provide only the complete profile and only on request, using the request-response semantics of the XMPP <iq/> stanza type. This model is most appropriate for stable entities that are always online and whose profile data does not change frequently, such as servers and server-side components (entities that are not always online or that frequently modify their profile data, such as IM users, may prefer to publish their information to entities that are always online, such as an IM user's server). While it may seem desirable to embed profile data in the responses an entity provides to service discovery information requests using Service Discovery Extensions (XEP-0128) 15, it is likely that profile data will be quite extensive; therefore, we define a standalone "wrapper" element for profile data, qualified by the 'urn:xmpp:tmp:profile' namespace (see Protocol Namespaces regarding issuance of one or more permanent namespaces).

2. Pubsub (publish-and-subscribe) semantics.

A more complex model is for an entity to publish its profile data to a publish-subscribe node or nodes and allow other entities to subscribe to that node or nodes, thus receiving notifications whenever the profiled entity updates its data. This model is more appropriate for entities that modify their profile data on a regular basis or when other entities wish to be informed when the profile data changes. Because this model will most likely be used most often by IM users and other intermittently-connected network endpoints, we use the simplified subset of the XMPP publish-subscribe extension defined in Personal Eventing Protocol (XEP-0163) ¹⁶ to implement this model.

3.2 Data Representation

As with data management, there are several possible approaches to representing profile data for communication over XMPP networks, including the following:

 Structured data formats, such as User Geolocation (XEP-0080) ¹⁷ and User Physical Location (XEP-0112) 18.

 $^{^{15}\}text{XEP-0128}$: Service Discovery Extensions https://xmpp.org/extensions/xep-0128.html.

¹⁶XEP-0163: Personal Eventing Protocol https://xmpp.org/extensions/xep-0163.html.

 $^{^{17}\}mbox{XEP-0080: User Geolocation} \mbox{\enskips://xmpp.org/extensions/xep-0080.html}\mbox{\enskips:/$

¹⁸XEP-0112: User Physical Location https://xmpp.org/extensions/xep-0112.html.



Such data formats have the advantage of being human-readable. However:

- 1. They are not easily extensible: developers of specialized community services would need to write their own structured data formats, even to add one new field.
- 2. They are not easy to map to backend data storage facilities (e.g., database administrators generally would prefer to have generic database schemas and re-usable code for parsing the XML wire protocol into the database fields).
- 3. They would require specialized interface handlers for each data structure, rather than a generic interface handler.

• A format represented by means of Resource Description Framework 19.

An argument could be made that RDF is a reasonable approach for representing profile data for communication over the XMPP network; however, such an argument will not be made in the current proposal. The author has considered RDF and has concluded that there are several reasons why RDF is undesirable as an XMPP wire protocol:

- RDF exists in an XML representation but the semantics of RDF impose a more complex conceptual structure (data triples) than does XML; this is sub-optimal since unnecessary complexity is to be avoided (see XMPP Design Guidelines (XEP-0134) ²⁰).
- 2. RDF requires a specialized parser rather than the normal XML parser that comes standard with all XMPP implementations.
- 3. As long as it is possible to define a consistent mapping of profile data to RDF representations, it should be straightforward to convert the XMPP data formats into those RDF representations if desired (e.g., to output a FOAF file).

• A format represented by means of Data Forms (XEP-0004).

The Data Forms protocol defined in XEP-0004 has several advantages for use over XMPP:

- 1. It can be parsed using an off-the-shelf XML parser.
- 2. It is already widely deployed in existing Jabber/XMPP clients, servers, and components.
- 3. The data forms protocol is easily extensible.
- 4. The Jabber/XMPP community possesses consistent methods for profiling and scoping data forms (as specified in Field Standardization for Data Forms (XEP-0068) ²¹).
- 5. Data forms have a generic schema that is easy to map to common data storage mechanisms (usually databases).

¹⁹Resource Description Framework (RDF) http://www.w3.org/RDF/>.

²⁰XEP-0134: XMPP Design Guidelines https://xmpp.org/extensions/xep-0134.html.

²¹XEP-0068: Field Data Standardization for Data Forms https://xmpp.org/extensions/xep-0068.html.



- 6. Data forms provide a consistent abstraction layer for XMPP applications, thus shielding them from changes in the profile data formats being defined by other Internet projects and standards development organizations.
- 7. The use of data forms as the medium of representation for communication over the wire does not prevent applications from storing backend profile data in some other underlying format (e.g., RDF or a database).

Therefore, this proposal specifies that profile data shall be represented in data forms scoped by a FORM_TYPE of 'urn:xmpp:tmp:profile' (see Protocol Namespaces regarding issuance of one or more permanent namespaces), in accordance with the field standardization methods defined in Field Standardization for Data Forms (XEP-0068) ²². For the sake of interoperability, profile data fields that will be in common use SHOULD be registered with the XMPP Registrar ²³ (although they may or may not be defined in a XMPP Extension Protocol specification). Profile data fields that are intended to be used only within the context of a specialized application MAY remain unregistered, but unregistered fields MUST begin with the string "x-" in accordance with Section 3.4 of XEP-0068.

The following is a simple and incomplete example of profile data represented via the Data Forms protocol, containing two registered data fields and one unregistered field:

Listing 1: A Basic Example

```
file xmlns='urn:xmpp:tmp:profile'>
 <x xmlns='jabber:x:data' type='result'>
   <field var='FORM_TYPE' type='hidden'>
     <value>urn:xmpp:tmp:profile</value>
    <field var='common_name'>
      <value>Peter Saint-Andre</value>
    </field>
    <field var='nickname'>
      <value>stpeter</value>
    </field>
    <field var='x-favorite_painters'>
      <value>Joaquin Sorolla</value>
      <value>Jan Vermeer</value>
    </field>
 </x>
</profile>
```

By specifying that all fields are scoped by a FORM_TYPE of 'urn:xmpp:tmp:profile', this proposal does not mean to imply that all profile data will or should be gathered in one data form. In reality, most such data will probably be gathered at the time of registration either

²²XEP-0068: Field Data Standardization for Data Forms https://xmpp.org/extensions/xep-0068.html.

²³The XMPP Registrar maintains a list of reserved protocol namespaces as well as registries of parameters used in the context of XMPP extension protocols approved by the XMPP Standards Foundation. For further information, see https://xmpp.org/registrar/.

²⁴ Alternatively, specialized applications MAY define separate FORM_TYPEs for their particular data elements.



at a website or via a "wizard" interface that breaks the process into smaller bundles (such as "Basic Personal Data", "Physical Location", "Internet Addresses", "Hobbies and Interests", and "Favorite Things"). The use of one FORM_TYPE is simply meant to scope the data fields so that each field is unique within the context of profile data. Any form that uses these fields along with a FORM_TYPE of 'urn:xmpp:tmp:profile' is of the "profile type" (i.e., is a specific instance of that type), which does not limit the number of forms that can be of that type.

However, scoping all data fields with a single FORM_TYPE implies it is necessary to define separate data fields for similar kinds of information. For example, the vCard specification (RFC 2426 ²⁵) defines "types" for certains kinds of data, such as email addresses, telephone numbers, and physical addresses, making it possible to specify that a telephone number corresponds to a fax machine or mobile phone or that a physical address corresponds to one's home or work location. In the Data Forms representation, any desired piece of information (e.g., work phone) must be represented with a separate data field.

In order to address most (if not all) of the pieces of information described in existing profile specifications, this document defines a great number of data fields. Even so, the data fields specified herein are not exhaustive, and it is expected that additional fields will be registered in the future through the mechanisms specified in the XMPP Registrar Considerations section of this document.

4 Producer Use Cases

4.1 Publishing a Full Profile

In order to publish a full profile, an entity sends an IQ-set to its server with a child element of file/> containing the full profile information.

Listing 2: Entity publishes full profile

```
<iq type='set' id='setfull'>
 file xmlns='urn:xmpp:tmp:profile'>
   <x xmlns='jabber:x:data' type='submit'>
      <field var='FORM_TYPE' type='hidden'>
        <value>urn:xmpp:tmp:profile</value>
      </field>
      <field var='nickname'>
        <value>Hamlet</value>
      </field>
      <field var='country'>
        <value>DK</value>
      </field>
      <field var='locality'>
        <value>Elsinore</value>
      </field>
```

²⁵RFC 2426: vCard MIME Directory Profile http://tools.ietf.org/html/rfc2426.



```
<field var='email'>
        <value>hamlet@denmark.lit</value>
      </field>
    </x>
 </profile>
</iq>
```

If the server can successfully process the request and host the full profile, it MUST return an IQ-result:

Listing 3: Server acknowledges success

```
<iq type='result' to='hamlet@denmark.lit/elsinore' id='setfull'/>
```

Otherwise it MUST return an error. If the server does not support the profile data functionality, the error MUST be <service-unavailable/>.

4.2 Updating One or More Profile Fields

In order to update selected fields in a public profile, an entity simply publishes the modified fields (not the entire profile) to a pubsub node of "urn:xmpp:tmp:profile" at its server using the PEP subset of the publish-subscribe extension, as specified in Personal Eventing Protocol $(XEP-0163)^{26}$.

Listing 4: Account owner publishes profile field(s)

```
<iq type='set' id='pub1'>
  <pubsub xmlns='http://jabber.org/protocol/pubsub'>
    <publish node='urn:xmpp:tmp:profile'>
        file xmlns='urn:xmpp:tmp:profile'>
          <x xmlns='jabber:x:data' type='result'>
            <field var='weblog'>
              <value>http://www.denmark.lit/blogs/princely_musings/
            </field>
          </x>
        </profile>
      </item>
    </publish>
  </pubsub>
</iq>
```

The PEP service then MUST send notifications containing the updated field(s) to the node subscribers:

²⁶XEP-0163: Personal Eventing Protocol https://xmpp.org/extensions/xep-0163.html.

Listing 5: Server generates notifications

```
<message to='francisco@denmark.lit' from='hamlet@denmark.lit/elsinore'</pre>
    type='headline' id='foo'>
  <event xmlns='http://jabber.org/protocol/pubsub#event'>
    <items node='urn:xmpp:tmp:profile'>
      <item>
        file xmlns='urn:xmpp:tmp:profile'>
          <x xmlns='jabber:x:data' type='result'>
            <field var='weblog'>
              <value>http://www.denmark.lit/blogs/princely_musings/
            </field>
          </x>
        </profile>
      </item>
    </items>
  </event>
</message>
```

If the field(s) published are "public", the publisher SHOULD then repost the full profile as described above in order to keep the full profile in sync.

Note: The account owner MAY decide to effectively maintain two profile subsets: public profile fields (posted via the "full profile" protocol) and restricted profile fields (published only via PEP). If so, the client MUST keep track of which fields are in the public profile subset and which fields are in the restricted profile subset, and MUST NOT update the full profile if the account owner has updated a field in the restricted profile set.

5 Consumer Use Cases

5.1 Discovering Support

If an entity can provide profile data directly using the standalone 'urn:xmpp:tmp:profile' namespace, it SHOULD advertise that feature in response to Service Discovery (XEP-0030) ²⁷ information requests:

Listing 6: A request for service discovery information

```
<iq type='get'
    from='bard@shakespeare.lit/globe'
    to='hamlet@denmark.lit'
```

²⁷XEP-0030: Service Discovery https://xmpp.org/extensions/xep-0030.html.

```
id='disco1'>
  <query xmlns='http://jabber.org/protocol/disco#info'/>
</iq>
```

Listing 7: A service discovery information response

```
<iq type='result'
    from='hamlet@denmark.lit'
    to='bard@shakespeare.lit/globe'
    id='disco1'>
  <query xmlns='http://jabber.org/protocol/disco#info'>
    <identity category='account' type='registered'/>
    <identity category='pubsub' type='pep'/>
    <feature var='urn:xmpp:tmp:profile'/>
  </query>
</iq>
```

Note: Because the foregoing request was sent to the bare JID <hamlet@denmark.lit>, the response is provided by the <denmark.lit> server on behalf of the registered account. The answer indicates that the server can provide profile data on behalf of the registered account and that it supports the personal eventing profile of XMPP Publish-Subscribe.

5.2 Requesting Full Profile

In order to request the full profile, the requesting entity sends an IQ-get to the providing entity's JID, where the request contains an empty <profile/> element qualified by the 'urn:xmpp:tmp:profile' namespace. In this example, the request is sent to a server, not a user (any XMPP entity can have a profile, including servers, gateways, Multi-User Chat (XEP-0045) ²⁸ rooms, and the like):

Listing 8: A request for profile data

```
<iq type='get'
    from='hamlet@denmark.lit/elsinore'
   to='shakespeare.lit'
   id='iq1'>
  file xmlns='urn:xmpp:tmp:profile'/>
</iq>
```

The server then replies:

Listing 9: A basic profile data response

²⁸XEP-0045: Multi-User Chat https://xmpp.org/extensions/xep-0045.html.

```
<iq type='result'
   from='shakespeare.lit'
   to='hamlet@denmark.lit/elsinore'
   id='iq1'>
 file xmlns='urn:xmpp:tmp:profile'>
   <x xmlns='jabber:x:data' type='result'>
     <field var='FORM_TYPE' type='hidden'>
       <value>urn:xmpp:tmp:profile</value>
     </field>
     <field var='common_name'>
       <value>shakespeare.lit IM server
     </field>
     <field var='country'>
       <value>UK</value>
     </field>
     <field var='region'>
       <value>England</value>
     </field>
     <field var='locality'>
       <value>London</value>
      </field>
     <field var='area'>
       <value>Bankside</value>
     </field>
      <field var='street'>
       <value>21 New Globe Walk</value>
     </field>
     <field var='postalcode'>
       <value>SE1 9DT</value>
     </field>
     <field var='lat'>
       <value>51.5076
     </field>
     <field var='lon'>
       <value>-0.0953</value>
     </field>
     <field var='landline_phone'>
       <value>+44 20 7902 1400
     </field>
      <field var='fax'>
       <value>+44 20 7902 1401
     </field>
     <field var='building'>
       <value>Globe Theatre</value>
     </field>
     <field var='email'>
       <value>admin@shakespeare.lit</value>
     </field>
   </x>
```



```
</profile>
</iq>
```

If a server supports stored profile data for user accounts that it hosts, a requesting entity can request the full profile for such an account:

Listing 10: A request for hosted profile data

```
<iq type='get'
    from='bard@shakespeare.lit/globe'
   to='hamlet@denmark.lit'
   id='iq2'>
  file xmlns='urn:xmpp:tmp:profile'/>
</iq>
```

If the requesting entity is not allowed to retrieve hosted profiles (e.g., because it is not on a list of entities permitted to "spider" the server's users), the server SHOULD return a <service-unavailable/> error:

Listing 11: Server returns service unavailable error

```
<iq type='error'
   from='hamlet@denmark.lit'
   to='bard@shakespeare.lit/globe'
   id='iq2'>
 file xmlns='urn:xmpp:tmp:profile'/>
  <error code='503' type='cancel'>
    <service-unavailable xmlns='urn:ietf:params:xml:ns:xmpp-stanzas'/>
  </error>
</iq>
```

If the requested account does not exist or has not published profile data, the server also SHOULD return a <service-unavailable/> error.

Otherwise, the server SHOULD return the profile for the hosted account.

Listing 12: Server returns profile data

```
<iq type='result'
    from='hamlet@denmark.lit'
   to='bard@shakespeare.lit/globe'
   id='iq2'>
  file xmlns='urn:xmpp:tmp:profile'>
    <x xmlns='jabber:x:data' type='result'>
      <field var='FORM_TYPE' type='hidden'>
        <value>urn:xmpp:tmp:profile</value>
      </field>
      <field var='nickname'>
        <value>Hamlet</value>
```

```
</field>
      <field var='country'>
        <value>DK</value>
      </field>
      <field var='locality'>
        <value>Elsinore</value>
      </field>
      <field var='email'>
        <value>hamlet@denmark.lit</value>
      </field>
      <field var='weblog'>
        <value>http://www.denmark.lit/blogs/princely_musings</value>
    </x>
 </profile>
</iq>
```

5.3 Receiving Profile Updates

In order to receive updated fields for a contact's profile, an entity shall encapsulate a feature of "urn:xmpp:tmp:profile+notify" in its Entity Capabilities (XEP-0115) 29 data. If the contact's server supports the personal eventing profile of XMPP Publish-Subscribe as described in Personal Eventing Protocol (XEP-0163) 30, the entity will receive notifications whenever the contact sends updated profile fields to the profile node:

Listing 13: Entity receives notification

```
<message to='francisco@denmark.lit' from='hamlet@denmark.lit/elsinore'</pre>
    type='headline' id='foo'>
 <event xmlns='http://jabber.org/protocol/pubsub#event'>
   <items node='urn:xmpp:tmp:profile'>
        file xmlns='urn:xmpp:tmp:profile'>
          <x xmlns='jabber:x:data' type='result'>
            <field var='weblog'>
              <value>http://www.denmark.lit/blogs/princely_musings/
            </field>
          </x>
        </profile>
     </item>
   </items>
 </event>
</message>
```

²⁹XEP-0115: Entity Capabilities https://xmpp.org/extensions/xep-0115.html.

³⁰ XEP-0163: Personal Eventing Protocol https://xmpp.org/extensions/xep-0163.html.

It is the responsibility of the receiving entity to correctly process the notification and update the local representation of the contact's profile information.

6 Data Representation

The following subsections specify common fields for defining various aspects of a person, which shall form the initial submission to the XMPP Registrar; many of these fields map to elements specified in vCard, xNAL, FOAF, LDAP (see RFC 2252 31, RFC 2256 32, and RFC 2798 ³³) ³⁴, and LDAP object classes such as Person, organizationalPerson, inetOrgPerson, and eduPerson.

6.1 Name Data Aspects

Mappings are provided to vCard, LDAP, xNAL, and FOAF.

6.1.1 Display Name

A display name is a version of a person's name intended for display in a user interface. Sometimes also called a "full name" or "formatted name".

The Data Forms field that represents a display name is "display_name".

This field maps to:

- vCard FN
- LDAP displayName
- · FOAF name

Listing 14: Display Name

```
<field var='display_name'>
 <value>Peter Saint-Andre</value>
</field>
```

³¹RFC 2252: Lightweight Directory Access Protocol (v3): Attribute Syntax Definitions http://tools.ietf.org/h tml/rfc2252>.

³²RFC 2256: A Summary of the X.500(96) User Schema for use with LDAPv3 http://tools.ietf.org/html/rf

³³RFC 2798: Definition of the inetOrgPerson LDAP Object Class http://tools.ietf.org/html/rfc2798.

 $^{^{34}}$ This specification does not require that profile data fields mapped to LDAP fields must adhere to the X.500 data types that are re-used by LDAP. However, implementations MAY enforce those data types if desired.

6.1.2 Familiar Name

A familiar name is a shortened or modified form of someone's given name that may be used in somewhat informal contexts or that is preferred by the person (e.g., "Chuck" instead of "Charles").

The Data Forms field that represents a familiar name is "familiar_name". This field maps to:

• eduPersonNickname

Listing 15: Familiar Name

```
<field var='familiar_name'>
    <value>Pete</value>
</field>
```

6.1.3 Family Name

A family name is that part of a person's name which signifies the person's primary family association. Sometimes also called a "last name" or "surname".

The Data Forms field that represents a family name is "family_name".

This field maps to:

- vCard FAMILY
- LDAP sn
- xNAL LastName
- FOAF family_name
- FOAF surname

Listing 16: Family Name

```
<field var='family_name'>
  <value>Saint-Andre</value>
</field>
```

6.1.4 Given Name

A given name is that part of a person's name which signifies the person's primary individual identity. Sometimes also called a "first name" or (in some countries) a "Christian name". The Data Forms field that represents a given name is "given_name". This field maps to:

- vCard GIVEN
- LDAP givenName
- xNAL FirstName
- FOAF first_name
- FOAF givenname

Listing 17: Given Name

```
<field var='given_name'>
  <value>J.</value>
</field>
```

6.1.5 Middle Name

A middle name is that part of a person's name which signifies the person's secondary individual identity. Sometimes also called a "middle initial".

The Data Forms field that represents a middle name is "middle_name". This field maps to:

- vCard MIDDLE
- xNAL MiddleName

Listing 18: Middle Name

```
<field var='middle_name'>
    <value>Peter</value>
</field>
```

6.1.6 Name Prefix

A name prefix is that part of a person's name which prepends the person's full name (e.g., Mr or Dr). Sometimes also called an "honorific" or "title".

The Data Forms field that represents a name prefix is "name_prefix".

This field maps to:

- vCard PREFIX
- xNAL Title
- FOAF title

Listing 19: Name Prefix

```
<field var='name_prefix'>
  <value>Mr</value>
  </field>
```

6.1.7 Name Suffix

A name suffix is that part of a person's name which is appended to the person's full name (e.g., Jr or Esq).

The Data Forms field that represents a name suffix is "name_suffix". This field maps to:

- vCard SUFFIX
- xNAL GeneralSuffix

Listing 20: Name Suffix

```
<field var='name_suffix'>
  <value>Esq</value>
</field>
```

6.1.8 Nickname

A nickname is a global, memorable (but not unique) friendly or informal name chosen by the owner of a JID. The purpose of a nickname is to associate a distinctive mapping between the person's unique JID and non-unique nickname. A nickname is normally used in online contexts (e.g., in chatrooms) that are less formal than real life (where a person's Familiar Name would be more appropriate). Sometimes also called an "alias". A person SHOULD specify only one nickname (i.e., not more than one).

The Data Forms field that represents a nickname is "nickname". This field maps to:

- vCard NICKNAME
- xNAL Alias
- FOAF nick

Listing 21: Nickname

6.1.9 Patronymic

In some cultures, one's name includes a part that is derived from the given name of one's father; this part of one's name is called a "patronymic".

The Data Forms field that represents a patronymic is "patronymic".

Listing 22: A Patronymic

```
<field var='patronymic'>
  <value>Ivanovich</value>
</field>
```

6.2 Physical Address Data Aspects

Mappings are provided to vCard, xNAL, and XEP-0112 (User Physical Location (XEP-0112) 35).

6.2.1 Country

A country is the sovereign nation in which a person is located. Sometimes also called a "nation".

The Data Forms fields that represent a country are "country", "home_country", and "work_country" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard COUNTRY (or XEP-0054 CTRY), optionally supplemented with the "HOME" or "WORK" type
- LDAP c
- xNAL CountryName
- XEP-0112 country

Listing 23: Country

```
<field var='country'>
    <value>USA</value>
</field>
```

³⁵XEP-0112: User Physical Location https://xmpp.org/extensions/xep-0112.html.

6.2.2 Region

A region is a second-level administrative unit within the nation in which a person is located. Sometimes also called a "province", "state", or "administrative area".

The Data Forms field that represents a region is "region".

The Data Forms fields that represent a region are "home_region" and "work_region" for home addresses and work addresses respectively.

This field maps to:

- vCard REGION, optionally supplemented with the "HOME" or "WORK" type
- LDAP st
- xNAL AdministrativeAreaName
- XEP-0112 region

Listing 24: Region

```
<field var='region'>
  <value>New York</value>
</field>
```

6.2.3 Locality

A locality is a defined place within the region in which a person is located. Sometimes also called a "city", "town", or "village".

The Data Forms fields that represent a locality are "locality", "home_locality", and "work_locality" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard LOCALITY, optionally supplemented with the "HOME" or "WORK" type
- LDAP l
- xNAL LocalityName
- XEP-0112 locality

Listing 25: Locality

```
<field var='locality'>
  <value>New York City</value>
</field>
```

6.2.4 Area

An area is a sub-division within the locality in which a person is located. Sometimes also called a "neighborhood", "suburb", "district", or "section".

The Data Forms fields that represent a area are "area", "home_area", and "work_area" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- xNAL DependentLocalityName
- XEP-0112 area

Listing 26: Area

```
<field var='area'>
  <value>Manhattan</value>
</field>
```

6.2.5 Street

A street is the street address (number plus street name, or two street names at an intersection) at which a person is located, or a postal box number for physical mail delivery. Sometimes also called a "street address".

The Data Forms fields that represent a street are "street", "home_street", and "work_street" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard STREET, optionally supplemented with the "HOME" or "WORK" type
- LDAP street
- xNAL ThoroughfareNumber + ThoroughfareName
- XEP-0112 street

Listing 27: Street

```
<field var='street'>
  <value>Fifth Avenue and 34th Street</value>
</field>
```

6.2.6 Building

A building is the name for a specific structure on a street or within an area. The Data Forms fields that represent a building are "building", "home_building", and "work_building" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard EXTADR, optionally supplemented with the "HOME" or "WORK" type
- xNAL BuildingName
- XEP-0112 building

Listing 28: Building

```
<field var='building'>
  <value>Empire State Building</value>
</field>
```

6.2.7 Floor

A floor is a named or numbered floor or level within a building. Sometimes also called a "level", "block", or "suite".

The Data Forms fields that represent a floor are "floor", "home_floor", and "work_floor" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard EXTADR, optionally supplemented with the "HOME" or "WORK" type
- xNAL SubPremiseNumber
- XEP-0112 floor

Listing 29: Floor

```
<field var='floor'>
  <value>102</value>
</field>
```

6.2.8 Room

A room is a named or numbered subdivision of a floor. Sometimes also called a "unit" or "apartment".

The Data Forms fields that represent a room are "room", "home_room", and "work_room" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard EXTADR, optionally supplemented with the "HOME" or "WORK" type
- LDAP roomNumber
- xNAL SubPremiseNumber
- XEP-0112 room

Listing 30: Room

```
<field var='room'>
  <value>Observatory</value>
</field>
```

6.2.9 Postal Box

A postal box is a set of numeric or alphanumeric characters used to identify a mailbox at a postal delivery center.

The Data Forms fields that represent a postal box are "postalbox", "home_postalbox", and "work_postalbox" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard POBOX, optionally supplemented with the "HOME" or "WORK" type
- LDAP postOfficeBox

Listing 31: Postal Box

```
<field var='postalbox'>
  <value>1641</value>
</field>
```

6.2.10 Postal Code

A postal code is a set of numeric or alphanumeric characters used to identify an area for postal delivery. Sometimes also called a "ZIP code" (in the U.S.).

The Data Forms fields that represent a postal code are "postalcode", "home_postalcode", and "work_postalcode" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard PCODE, optionally supplemented with the "HOME" or "WORK" type
- LDAP postalCode
- xNAL PostalCodeNumber

• XEP-0112 postalcode

Listing 32: Postal Code

```
<field var='postalcode'>
  <value>10002</value>
</field>
```

6.2.11 Postal Address

A postal address is a free-form mailing address, which may be easier to enter (or, in some cultural contexts, more appropriate) than the atomic address parts such as street, floor, etc. The Data Forms fields that represent a postal address are "postaladdress", "home_postaladdress", and "work_postaladdress" for generic addresses, home addresses, and work addresses respectively.

This field maps to:

• LDAP postalAddress, homePostalAddress

Listing 33: Postal Address

```
<field var='work_postaladdress'>
    <value>1899 Wynkoop Street</value>
    <value>Suite 600</value>
    <value>Denver, CO 80202</value>
    <value>USA</value>
</field>
```

6.3 Geolocation Data Aspects

Mappings are provided to vCard and XEP-0080 (User Geolocation (XEP-0080) ³⁶).

6.3.1 Altitude

Altitude is a person's height or depth in relationship to sea level, where positive altitude is meters above sea level and negative altitude is meters below sea level.

The Data Forms field that represents altitude is "alt".

This field maps to:

XEP-0080 alt

 $^{^{36}}$ XEP-0080: User Geolocation https://xmpp.org/extensions/xep-0080.html.

Listing 34: Altitude

```
<field var='alt'>
  <value>1609</value>
</field>
```

6.3.2 Latitude

Latitude is a person's latitude in relation to the equator, where positive latitude is north of the equator and negative latitude is south of the equator.

The Data Forms field that represents latitude is "lat".

This field maps to:

- vCard LAT
- XEP-0080 lat

Listing 35: Latitude

```
<field var='lat'>
  <value>39.75477</value>
</field>
```

6.3.3 Longitude

Longitude is a person's longitude in relation to the equator, where positive longitude is east of the meridian and negative longitude is west of the equator.

The Data Forms field that represents longitude is "lon".

This field maps to:

- vCard LON
- XEP-0080 lon

Listing 36: Latitude

```
<field var='lon'>
  <value>-104.99768</value>
</field>
```

6.4 Telephony Address Data Aspects

6.4.1 Fax Number

A fax number is a number for a machine that handles fascimile transmissions. The Data Forms fields that represent a fax number are "fax", "home_fax", and "work_fax" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard TEL (+ "FAX" modifier), optionally supplemented with the "HOME" or "WORK" type
- LDAP facsimileTelephoneNumber

Listing 37: Fax Number

```
<field var='fax'>
  <value>303-308-3215</value>
</field>
```

6.4.2 Landline Telephone Number

A landline telephone number is a number for a traditional "PSTN" or "POTS" telephone. The Data Forms fields that represent a landline telephone number are "landline", "home_landline", and "work_landline" for generic addresses, home addresses, and work addresses respectively.

This field maps to:

- vCard TEL, optionally supplemented with the "HOME" or "WORK" type
- LDAP telephoneNumber
- FOAF phone

Listing 38: Landline Telephone Number

```
<field var='landline_phone'>
  <value>303-308-3282</value>
</field>
```

6.4.3 Mobile Telephone Number

A mobile telephone number is a number for a mobile phone or cell phone on a wireless network.

The Data Forms fields that represent a mobile telephone number are "mobile", "home_mobile", and "work_mobile" for generic addresses, home addresses, and work addresses



respectively.

This field maps to:

- vCard TEL (+ "CELL" modifier), optionally supplemented with the "HOME" or "WORK" type
- LDAP mobile
- FOAF phone

Listing 39: Mobile Telephone Number

```
<field var='mobile_phone'>
 <value>303-555-1212
</field>
```

6.4.4 Pager Number

A pager number is a number for a dedicated alphanumeric paging device.

The Data Forms fields that represent a pager number are "pager", "home_pager", and "work_pager" for generic addresses, home addresses, and work addresses respectively. This field maps to:

- vCard TEL (+ "PAGER" modifier), optionally supplemented with the "HOME" or "WORK" type
- · LDAP pager

Listing 40: Pager Number

```
<field var='pager'>
 <value>303-555-1212
</field>
```

6.4.5 SIP Address

A SIP address is a sip: or sips: URI at which a person can be contacted for Voice over Internet Protocol (VoIP) communications.

The Data Forms field that represents a SIP address is "sip_address".

This field does not map to data in vCard or any other profile representation format.

Listing 41: SIP Address

```
<field var='sip_address'>
 <value>sip:stpeter@sipspeare.lit</value>
</field>
```

6.4.6 Skype Address

A Skype address is an address on the popular Skype system for Voice over Internet Protocol (VoIP) communications.

The Data Forms field that represents a Skype address is "skype_address".

This field does not map to data in vCard or any other profile representation format.

Listing 42: Skype Address

```
<field var='skype_address'>
  <value>SomeSkypeUser</value>
</field>
```

6.4.7 Videophone Address

A videophone address is an address used for for H.323 video conferencing systems. The Data Forms field that represents a videophone address is "video_phone". This field does not map to data in vCard or any other profile representation format.

Listing 43: Videophone Address

```
<field var='video_phone'>
  <value>foo</value>
  </field>
```

6.5 Electronic Address Data Aspects

6.5.1 AIM Screen Name

An AIM screen name is an address at which a person or other entity can be contacted on the AOL Instant Messenger service.

The Data Forms field that represents an AIM screen name is "aim_id". This field maps to:

FOAF aimChatID

Listing 44: AIM Screen Name

```
<field var='aim_id'>
  <value>psaintandre</value>
</field>
```



6.5.2 Email Address

An email address is the value of a mailto: URI at which a person or other entity can be contacted using standard electronic mail protocols.

The Data Forms field that represents longitude is "email".

This field maps to:

- vCard EMAIL
- · LDAP mail

Listing 45: Email address

```
<field var='email'>
 <value>stpeter@jabber.org</value>
 <value>stpeter@gmail.com</value>
</field>
```

6.5.3 ICQ Number

An ICQ number is an address at which a person or other entity can be contacted on the ICQ instant messaging service.

The Data Forms field that represents an ICQ number is "icq_id".

This field maps to:

FOAF icqChatID

Listing 46: ICQ number

```
<field var='icq_id'>
 <value>70902454
</field>
```

6.5.4 Jabber ID

A Jabber ID is the value of an xmpp: URI at which a person or other entity can be contacted over a Jabber/XMPP network.

The Data Forms field that represents a Jabber ID is "jid".

This field maps to:

FOAF jabberID

Listing 47: Jabber ID

```
<field var='jid'>
  <value>stpeter@jabber.org</value>
  <value>peter@saint-andre.com</value>
</field>
```

6.5.5 MSN Address

An MSN address is address at which a person or other entity can be contacted on the MSN instant messaging service.

The Data Forms field that represents an MSN address is "msn_id".

This field maps to:

FOAF msnChatID

Listing 48: MSN Address

```
<field var='msn_id'>
  <value>petersaintandre@hotmail.com</value>
</field>
```

6.5.6 Yahoo ID

A Yahoo ID is address at which a person or other entity can be contacted on the Yahoo! Instant Messenger service.

The Data Forms field that represents a Yahoo ID is "yahoo_id".

This field maps to:

FOAF yahooChatID

Listing 49: Yahoo ID

```
<field var='yahoo_id'>
    <value>psaintandre</value>
</field>
```

6.6 World Wide Web Resource Aspects

6.6.1 Avatar URL

An avatar is an often fanciful representation of a user's desired self-image or persona (e.g., in the context of a game). An avatar is usually not intended to be an accurate picture of the user's actual physical appearance (that is handled by the photo_url and photo_data fields).

An avatar can come in two forms: the avatar data itself, or a URL for a avatar.

The Data Forms field that represents the URL for an avatar is "avatar_url".

This field does not map to data in vCard or any other profile representation format.

Listing 50: Avatar URL

```
<field var='avatar_url'>
    <value>http://www.saint-andre.com/images/stpeter_small.jpg</value>
</field>
```

6.6.2 Biographical URL

A biographical URL is the value of an http: URI at which can be found biographical information about a person.

The Data Forms field that represents a biographical URL is "bio".

Listing 51: Biographical URL

```
<field var='bio'>
  <value>http://www.xmpp.org/xsf/people/stpeter.shtml</value>
  <value>http://www.saint-andre.com/me/</value>
</field>
```

6.6.3 FOAF URL

A FOAF URL is the value of an http: URI at which can be found a "friend of a friend" (FOAF) file about a person or entity.

The Data Forms field that represents a FOAF URL is "foaf_url".

Listing 52: FOAF URL

```
<field var='foaf_url'>
   <value>http://www.saint-andre.com/me/foaf.rdf</value>
</field>
```

6.6.4 Homepage URL

A homepage URL is the value of an http: URI that is the default resource on the World Wide Web for a person or other entity.

The Data Forms field that represents a homepage URL is "homepage". This field maps to:

• LDAP labelledURI

FOAF homepage

Listing 53: Homepage URL

```
<field var='homepage'>
  <value>http://www.saint-andre.com/</value>
</field>
```

6.6.5 OpenID

An OpenID is the value of a URI by which a person can sign onto multiple websites or other Internet services using a single identifier (see http://openid.net/).

The Data Forms field that represents an OpenID is "openid".

This field maps to:

FOAF openid

Listing 54: OpenID

```
<field var='openid'>
  <value>https://stpeter.startssl.com/</value>
</field>
```

6.6.6 Photo URL

A photograph provides a pictorial representation of a person. Sometimes also called a "mugshot".

A photograph can come in two forms: the photo data itself (see below) or a URL for a photograph (e.g., the vCard PHOTO element can represent either, while the FOAF depiction and FOAF img can represent only a URL). The Data Forms field specified here identifies a URL for a photograph, not the data itself.

The Data Forms field that represents the URL for a photograph is "photo_url". This field maps to:

- vCard PHOTO
- FOAF depiction
- FOAF img

Listing 55: Photo URL

```
<field var='photo_url'>
    <value>http://www.saint-andre.com/images/stpeter.jpg</value>
    <value>http://www.saint-andre.com/images/stpeter_hell.jpg</value>
    <value>http://www.saint-andre.com/images/stpeter_oscon.jpg</value>
</field>
```

6.6.7 Publications URL

A publications URL is the value of an http: URI at which can be found the list of a person's published writings.

The Data Forms field that represents a publications URL is "publications".

This field maps to:

FOAF publications

Listing 56: Publications URL

```
<field var='publications'>
    <value>http://www.saint-andre.com/thoughts/publications.html</value>
</field>
```

6.6.8 Resume URL

A resume URL is the value of an http: URI at which can be found a person's resume or curriculum vitae.

The Data Forms field that represents a resume URL is "resume".

Listing 57: Resume URL

```
<field var='resume'>
    <value>http://www.saint-andre.com/work/</value>
</field>
```

6.6.9 Status URL

A status URL is the value of an http: URI that specifies the current status of a person or other entity (e.g., a person's online presence or a server's uptime).

The Data Forms field that represents a homepage URL is "status_url".

Listing 58: Status URL

```
<field var='status_url'>
  <value>http://status.jabber.org/</value>
</field>
```

6.6.10 Organizational URL

An organizational URL is the value of an http: URI that specifies the homepage for an organization or employer.

The Data Forms field that represents an organizational URL is "org_url".

This field maps to:

FOAF workplaceHomepage

Listing 59: Organizational URL

```
<field var='org_url'>
  <value>http://www.jabber.org/</value>
</field>
```

6.6.11 Weblog URL

A weblog URL is the value of an http: URI at which a person or other entity maintains a weblog.

The Data Forms field that represents a weblog URL is "weblog".

This field maps to:

FOAF weblog

Listing 60: Weblog URL

```
<field var='weblog'>
  <value>http://www.saint-andre.com/blog/</value>
</field>
```

6.7 Organizational Data Aspects

6.7.1 Alternative Contact

It may be appropriate to list others who can be contacted if the individual is not available.

Listing 61: Alternative Contact

```
<field var='alt_contact'>
  <value>xmpp:peter@jabber.org</value>
</field>
```

6.7.2 Affiliation

An affiliation is a person's relationship to an institution, such as student, faculty, intern, fellow. An affiliation is in general less rigid than an Employee Type, which may not be relevant in noncommercial organizations.

The Data Forms field that represents an organizational affiliation is "affiliation". This field maps to:

• LDAP eduPersonAffiliation

Listing 62: Affiliation

```
<field var='affiliation'>
  <value>faculty</value>
</field>
```

6.7.3 Assistant

In some organizations, a person may be assisted by another individual. The Data Forms field that represents an assistant is "assistant". This field maps to:

· LDAP secretary

Listing 63: Assistant

```
<field var='assistant'>
  <value>Peter Pan</value>
</field>
```

6.7.4 Business Category

The kind of business performed by an organization.

The Data Forms field that represents a business category is "business_category".

This field maps to:

LDAP business_category

Listing 64: Business Category

```
<field var='business_category'>
  <value>Automobile sales</value>
</field>
```

6.7.5 Department Name

Some organizations have departments, which can be named or numbered. The Data Forms field that represents a department name is "department_name".

Listing 65: Department Name

6.7.6 Department Number

Some organizations have departments, which can be named or numbered. The Data Forms field that represents a department number is "department_number". This field maps to:

• LDAP departmentNumber

Listing 66: Department Number

```
<field var='department_number'>
  <value>5674</value>
</field>
```

6.7.7 Employee Number

Some organizations assign numbers to employees.

The Data Forms field that represents an employee number is "employee_number". This field maps to:

• LDAP employeeNumber

Listing 67: Employee Number

```
<field var='employee_number'>
    <value>1</value>
</field>
```

6.7.8 Employee Type

Some organizations have different types of employees, such as "full-time", "part-time", "contractor", and "temp".

The Data Forms field that represents an employee type is "employee_type". This field maps to:

• LDAP employeeType

Listing 68: Employee Type



6.7.9 Job Title

A job title is the official name of a person's position within an organization. The Data Forms field that represents a job title is "job_title". This field maps to:

- vCard TITLE
- LDAP title
- FOAF title

Listing 69: Job Title

```
<field var='job_title'>
 <value>Executive Director</value>
</field>
```

6.7.10 Manager

In most organizations, a person is managed by or reports to another individual (often not exposed outside the organization).

The Data Forms field that represents a manager is "manager".

This field maps to:

· LDAP manager

Listing 70: Manager

```
<field var='manager'>
  <value>William Shakespeare</value>
</field>
```

6.7.11 Organizational Name

An organizational name is the official name of an organization (company, school, etc.) within which a person works.

The Data Forms field that represents the name of an organization is "org_name". This field maps to:

- vCard ORGNAME
- LDAP o

Listing 71: Organizational Name

```
<field var='org_name'>
   <value>XMPP Standards Foundation</value>
</field>
```

6.7.12 Organizational Role

An organizational role describes a person's profession or how a person contributes within an organization.

The Data Forms field that represents an organizational role is "org_role". This field maps to:

vCard ROLE

Listing 72: Organizational Role

```
<field var='org_role'>
    <value>Patron Saint</value>
    <value>Chief Evangelist</value>
    <value>Glorified Tech Writer</value>
</field>
```

6.7.13 Organizational Unit

An organizational unit is the name of part (subsidiary, department, etc.) of an organization. The Data Forms field that represents an organizational unit is "org_unit". This field maps to:

- vCard ORGUNIT
- LDAP ou

Listing 73: Organizational Unit

```
<field var='org_unit'>
  <value>Jabber Council</value>
</field>
```

6.7.14 Primary Affiliation

An affiliation is a person's relationship to an institution, such as student, faculty, intern, fellow. (An affiliation is in general less rigid than an Employee Type, which may not be relevant in noncommercial organizations.) Since a person may be affiliated with multiple organizations (e.g., multiple research institutions), the primary affiliation is used to describe

a person's affiliation to their primary organization.

The Data Forms field that represents a primary organizational affiliation is "primary_affiliation".

This field maps to:

• LDAP eduPersonPrimaryAffiliation

Listing 74: Primary Affiliation

```
<field var='primary_affiliation'>
  <value>fellow</value>
</field>
```

6.7.15 Primary Organizational Name

An organizational name is the official name of an organization (company, school, etc.) within which a person works. Since a person may be affiliated with multiple organizations (e.g., multiple research institutions), the primary organizational name is used to differentiate the main organization with which a person is affiliated.

The Data Forms field that represents the name of a primary organization is "primary_org_name".

This field maps to:

• vCard o

Listing 75: Primary Organizational Name

```
<field var='primary_org_name'>
  <value>Columbia University</value>
</field>
```

6.7.16 Primary Organizational Role

An organizational role describes a person's profession or how a person contributes within an organization. Since a person may be affiliated with multiple organizations (e.g., multiple research institutions), the primary organizational role is used to differentiate the person's role at their primary organization.

The Data Forms field that represents an organizational role is "primary_org_role". This field maps to:

vCard ROLE

Listing 76: Primary Organizational Role

```
<field var='primary_org_role'>
  <value>Professor Emeritus</value>
</field>
```

6.7.17 Primary Organizational Unit

An organizational unit is the name of part (subsidiary, department, etc.) of an organization Since a person may be affiliated with multiple organizational units (e.g., multiple schools within a university), the primary organizational name is used to differentiate the main organization with which a person is affiliated.

The Data Forms field that represents an organizational unit is "primary_org_unit". This field maps to:

- LDAP ou
- LDAP eduPersonPrimaryOrgUnitDN

Listing 77: Primary Organizational Unit

```
<field var='primary_org_unit'>
  <value>Jabber Council</value>
</field>
```

6.7.18 System Username

Usually a person has a system or network username within an organization (usually not exposed outside the organization).

The Data Forms field that represents such a username is "system_username". This field maps to:

- LDAP uid
- LDAP userid

Listing 78: System Username

6.7.19 Teams

People often work in teams. Sometimes it can be helpful to list those teams. The Data Forms field that represents a work team is "teams".

Listing 79: Teams

```
<field var='teams'>
    <value>Infrastructure Team</value>
    <value>Jabber Council</value>
</field>
```

6.7.20 Workstation Address

Often a person has a dedicated workstation address or name within an organization (usually not exposed outside the organization).

The Data Forms field that represents such a username is "workstation".

Listing 80: Workstation Address

```
<field var='workstation'>
  <value>squire</value>
</field>
```

6.8 Basic Personal Data Aspects

These data fields are not necessarily permanent, but do not tend to change very often if at all.

6.8.1 Birth Day-of-Month

A birth day-of-month is the day of the month in which a person was born. (Note: This data field is *not* what in English is usually referred to as a person's "birthday", i.e. the year+month+day on which the person was born; the "birthday" is split into three data fields in order to protect personal privacy, since a given individual might want to disclose his or her birth year, birth month, birth day-of-month, or some combination thereof but not all three.)

The Data Forms field that represents a birth day-of-month is "birth_dayofmonth".

When combined with other birthday-related fields, this field maps to:

vCard BDAY

Listing 81: Birth Day-of-Month

```
<field var='birth_dayofmonth'>
  <value>06</value>
</field>
```

6.8.2 Birth Month

A birth month is the month of the year in which a person was born. The Data Forms field that represents a birth month is "birth_month". When combined with other birthday-related fields, this field maps to:

vCard BDAY

Listing 82: Birth Month

```
<field var='birth_month'>
  <value>08</value>
</field>
```

6.8.3 Birth Year

A birth year is the year in which a person was born. The Data Forms field that represents a birth year is "birth_year". When combined with other birthday-related fields, this field maps to:

vCard BDAY

Listing 83: Birth Year

```
<field var='birth_year'>
  <value>1966</value>
</field>
```

6.8.4 Description

It can be helpful to provide a natural-language description of a person. The Data Forms field that represents a description of a person is "description". This field maps to:

• LDAP description

Listing 84: Description

```
<field var='description'>
    <value>I'm_a_Jabber_fanatic.</value>
</field>
```

6.8.5 Eye Color

Some people may want to know the color of a person's eyes. The allowable or recommended values for this field are not specified.

The Data Forms field that represents a person's eye color is "eye_color".

Listing 85: Eye Color

```
<field var='eye_color'>
  <value>blue</value>
</field>
```

6.8.6 Gender

Gender is the self-defined gender of a person (this is not limited to "male" and "female", although those are the expected values in most instances). Sometimes also called "sex" or "gender identification".

The Data Forms field that represents a person's gender is "gender".

This field maps to:

FOAF gender

Listing 86: Gender

```
<field var='gender'>
  <value>male</value>
</field>
```

6.8.7 Hair Color

Some people may want to know the color of a person's hair (if any). The allowable or recommended values for this field are not specified.

The Data Forms field that represents a person's hair color is "hair_color".

Listing 87: Hair Color

```
<field var='hair_color'>
  <value>none</value>
  </field>
```

6.8.8 Height

Some people may want to know a person's height. This SHOULD be expressed in centimeters (which can be transformed into other units if necessary by a client).

The Data Forms field that represents a person's height is "height".

Listing 88: Height

```
<field var='height'>
  <value>178</value>
</field>
```

6.8.9 Weight

Yes, it is a sensitive topic, but some people may want to know a person's weight. This SHOULD be expressed in kilograms (which can be transformed into other units if necessary by a client). The Data Forms field that represents a person's weight is "weight".

Listing 89: Weight

```
<field var='weight'>
  <value>75</value>
</field>
```

6.9 Extended Personal Data Aspects

6.9.1 Areas of Expertise

An area of expertise is a subject in which a person has a great deal of knowledge. The Data Forms field that represents an area of expertise is "expertise".

Listing 90: Areas of Expertise

6.9.2 Avatar Data

An avatar is an often fanciful representation of a user's desired self-image or persona (e.g., in the context of a game). An avatar is usually not intended to be an accurate picture of the user's actual physical appearance (that is handled by the photo_url and photo_data fields). An avatar can come in two forms: the avatar data itself, or a URL for a avatar. The Data Forms field that represents avatar data is "avatar_data".

This field does not map to data in vCard or any other profile representation format.

Listing 91: Avatar Data

```
<field var='avatar_data'>
    <value>base64-encoded-image-data</value>
</field>
```

6.9.3 Clubs

Some people are members of clubs or other voluntary organizations. The Data Forms field that represents club memberships is "clubs".

Listing 92: Club Memberships

```
<field var='clubs'>
  <value>DENSA</value>
</field>
```

6.9.4 Dietary Preferences

Some people have dietary preferences (vegan, vegetarian, kosher, peanut allergy, no shellfish, etc.).

The Data Forms field that represents dietary preferences is "dietary_preferences".

Listing 93: Dietary Preferences

```
<field var='dietary_preferences'>
    <value>none</value>
</field>
```

6.9.5 Hobbies

A hobby is a non-work activity that a person enjoys pursuing. Also called an "avocation". The Data Forms field that represents a hobby is "hobby".

Listing 94: Some Hobbies

```
<field var='hobby'>
  <value>guitar</value>
  <value>songwriting</value>
  <value>blogging</value>
  <value>reading</value>
  <value>hiking</value>
</field>
```

6.9.6 Interests

An interest a thing that a person cares about or is curious about. It is, generally, less active

The Data Forms field that represents an interest is "interest".

Listing 95: Some Interests

```
<field var='interest'>
 <value>history</value>
 <value>baseball</value>
  <value>economics</value>
</field>
```

6.9.7 Languages Known Less Well

Some people know more than one language, but less than well (e.g., the person may not be able to speak fluently). The definition of "less well" is left to the user.

The value of this field MUST be an abbreviation for a language as specified in RFC 4646 37 .

The Data Forms field that represents a language known less that well is "languages_lesswell".

Listing 96: Languages Known Less than Well

```
<field var='languages_lesswell'>
 <value>cz</value>
 <value>de</value>
 <value>nl</value>
</field>
```

6.9.8 Languages Known Well

Everyone knows at least one language well (e.g., they are able to speak or write the language with a fair degree of fluency). Determination of whether someone knows a language "well" or "fluently" is left to the user.

The value of this field MUST be an abbreviation for a language as specified in RFC 4646 38. The Data Forms field that represents a language known well is "languages_well". This field maps to:

LDAP preferredLanguage

³⁷RFC 4646: Tags for Identifying Languages http://tools.ietf.org/html/rfc4646>.

³⁸RFC 4646: Tags for Identifying Languages http://tools.ietf.org/html/rfc4646>.

Listing 97: Languages Known Well

```
<field var='languages_well'>
    <value>en</value>
    </field>
```

6.9.9 License Plate Number

Many people own automobiles, which usually have license or registration numbers.

The Data Forms field that represents a car license or registration number is "car_license_number".

This field maps to:

LDAP carLicense

Listing 98: License Plate Number

```
<field var='car_license_number'>
  <value>JABBER</value>
</field>
```

6.9.10 Marital Status

Human beings often get married, sometimes get divorced, become widowed, etc. The Data Forms field that represents whether a person's marital status is "marital_status".

Listing 99: Marital Status

```
<field var='marital_status'>
  <value>married</value>
</field>
```

6.9.11 Myers-Briggs Type Indicator

A Myers-Briggs type indicator is four-letter acronym that is a popular way to characterize different personality types.

The Data Forms field that represents a Myers-Briggs type indicator is "mbti". This field maps to:

FOAF myersBriggs

Listing 100: Myers-Briggs Type Indicator

```
<field var='mbti'>
  <value>INTP</value>
</field>
```

6.9.12 Photo Data

A photo provides a pictorial representation of a person. Sometimes also called a "mugshot". A photo can come in two forms: the photo data itself, or a URL for a photo (e.g., the vCard PHOTO element can represent either, while the FOAF depiction and FOAF img can represent only a URL).

The Data Forms field that represents photo data is "photo_data". This field maps to:

- vCard PHOTO
- LDAP jpegPhoto

Listing 101: Photo Data

```
<field var='photo_data'>
  <value>base64-encoded-image-data</value>
</field>
```

6.9.13 Profession

A profession is what a person does for his or her primary employment. Also known as a "vocation". The allowable or recommended values for this field are not specified. The Data Forms field that represents a profession is "profession".

Listing 102: A Profession

```
<field var='profession'>
  <value>software engineer</value>
</field>
```

6.9.14 Religious Affiliation

Many people feel affiliated with a religious belief system. The Data Forms field that represents a religious affiliation is "religion".

Listing 103: Religious Affiliation

```
<field var='religion'>
  <value>none</value>
</field>
```

6.9.15 Sexual Orientation

The allowable or recommended values for this field are not specified.

The Data Forms field that represents a person's sexual orientation is "sexual_orientation".

Listing 104: Sexual Orientation

6.9.16 Smoker

Some people smoke tobacco in various forms (cigarettes, cigars, pipes, etc.). The Data Forms field that represents whether a person smokes is "smoker".

Listing 105: Smoker

```
<field var='smoker'>
  <value>no</value>
</field>
```

6.9.17 Wishlist

A wishlist is a list of items that a person would like to receive as gifts. The Data Forms field that represents a wishlist is "wishlist".

Listing 106: Wishlist

```
<field var='wishlist'>
  <value>A Mini Cooper</value>
</field>
```

6.9.18 Zodiac Sign (Chinese)

A Chinese zodiac sign denotes the type of year in which a person was born according to the Chinese calendar (e.g., the year of the dragon).

The Data Forms field that represents a Chinese zodiac sign is "zodiac_chinese".

Listing 107: Zodiac Sign (Chinese)

6.9.19 Zodiac Sign (Western)

A Western zodiac sign is that part of the astrological belt under which a person was born; each sign is named after one of the constellations.

The Data Forms field that represents a Western zodiac sign is "zodiac_western".

Listing 108: Zodiac Sign (Western)

```
<field var='zodiac_western'>
  <value>Leo</value>
</field>
```

6.10 Security Data Aspects

Some people have PGP keys, X.509 certificates, and the like.

6.10.1 PGP Key

The ASCII armored output of a PGP key. The Data Forms field that represents a PGP key is "pgpkey". This field maps to:

vCard KEY with TYPE of PGP

Listing 109: PGP Key

```
<field var='pgpkey'>
  <value>
-{}-{}-{}-{}-BEGIN PGP PUBLIC KEY BLOCK-{}-{}-{}-{}-
Version: GnuPG v1.2.4 (Darwin)
mQGiBEGSeUQRBADTT8NqGpxDQ1GjmAJBDNET0blyb1LF6exYLxydX+hzcooE5WxP
Zdo5Xx0RrLY1KmmcKv0Z8cG/kei2pkS05h/oqluphGmzMBIeC/ox22z87PKpVDfj
OEYQOZqhqdFI+KRIa4M89CQO01N5V2KlX9GaNjxRearKvLgsoeTzpPtybwCgl91i
SqQnry1YV+PF0jRcDT7cX+UD/2JxXU5d1Z1WZf7ttM3QjSaPc9CA4fS+axinRkn/
IbRJ/Lj8Tz+Vb4kBbBhmFG8JCoRtj2J8bsDdaFCh7nHqT2u4oXy0NJSCKrDRBcuL
bEQfasT/cuBXIM2A7nB1UtlUCYXnINxakYLIsW9BvvFN935FhZ81EJvLW34W2Mf7
Y+9ZA/0adScaI05UUE5RRcZSiXs8/p+R6SeaW2gjS5beL5Wv6ExR1De92rGqrjtN
PmBRiDiVBSoYlqOepBZk+wM+/B4WMsmUFVeXsXWjWMlghyyni2rI1Z2v1UH8KBKm
259k7SlU/BbnEAHIzuHPSQHJNUX+YqWArz1v5tDcQn7L1Wo7PbRAUGV0ZXIgU2Fp
bnQtQW5kcmUgKHhtcHA6c3RwZXRlckBqYWJiZXIub3JnKSA8c3RwZXRlckBqYWJi
ZXIub3JnPoheBBMRAgAeBQJBknlEAhsDBgsJCAcDAgMVAgMDFgIBAh4BAheAAAoJ
EFmFiWTXBRKsfeQAoJdO0PvP1Mi/kJ9U1zVpa4GPpXYCAJ9oFjonfr+Z3ZTefjSb
tZpE2mny57kCDQRBknlzEAgAisWlkK6daVjrxouZK9KvX8tt3CKVse4CY52Lq7xi
dtEAhDcXX9SgTnlxgrcCnBipj/OMi/B2M0U88qv3TcsZ0dWZt7H4FnHJvU4xloK8
qRkJ7xa6gCEoPAc7ESdr//6J/eEvWMqixstOUyfRg2AQp/eSHX0C1/TQImRVZbh6
```

HYCehrqpErAnz0VY8nvun3709LgvIMUvKrnV71F9wOuuhWCK9IYdpmgoD4d/Gr4t ZVuE1jYN4tBLyQXtJDAR/UvKHEiXUAhsfXOtfCUQV5MaxM6YQce63BG105kS7oLH Sx+KYOX1vEi3k10FfH5CpqYaxmfhSzdyz7Hhdsl+IbkhzwAECwf/YQfpx4z9dnJn 3ePrZhz5SI4KjdbOCmqhLFd8aVoQ9BCriePH3kPjjoE9Qz+0NlFqzuG4/tkZkAok BA0GqYE4XXgvpwGpK95mlUvxD0owu0fLVQA8NfpU3U7YItZkfAPZ2M+PnmayRILi ØyBmm1taV11CD2mc2vhsMRUoD1DUworSzQuTG9Y1Q89Q2/1LsoQzYjBz9XIfYV4A MPr/PKPkKy3D7BYHi/DOnkcP9hLXJSCjgV5TpuWuCVX9aYU2Yb7BfY1OFORBCUaV B1YLAPtXqfqjz25pIQPDEUbpKzhEO7xNU4EPT8ZsSfqqOd3aMet8McieRfMd+VIe 4J10UIg1oYhJBBgRAgAJBQJBknlzAhsMAAoJEFmFiWTXBRKs/GgAn0R63qTEQd/e XhK8hFkPvXjudl7xAJ95+2fAHfmHheZJVaO8VaJiL54Tvw== =ZRIc -{}-{}-{}-{}-END PGP PUBLIC KEY BLOCK-{}-{}-{}-</value> </field>

6.10.2 PGP Key Fingerprint

The fingerprint (hashed value) of a PGP key.

The Data Forms field that represents a PGP fingerprint is "pgp_fingerprint".

Listing 110: PGP Fingerprint

```
<field var='pgp_fingerprint'>
 <value>E5CA EAE7 C8D6 CFE2 6D7A 8653 5985 8964 D705 12AC
</field>
```

6.10.3 PGP Key ID

The ID of a PGP key.

The Data Forms field that represents a PGP key ID is "pgpkey_id".

Listing 111: PGP Key ID

```
<field var='pgpkey_id'>
  <value>D70512AC</value>
</field>
```

6.10.4 X.509 Fingerprint (MD5)

The fingerprint of an X.509 certificate, hashed using MD5.

The Data Forms field representing such a value is "x509_fingerprint_md5".

Listing 112: X.509 Fingerprint (MD5)

```
<field var='x509_fingerprint_md5'>
```

```
<value>5D 41 20 54 7C 90 49 A1 78 36 07 29 75 9B A7 D0</value>
</field>
```

6.10.5 X.509 Fingerprint (SHA-1)

The fingerprint of an X.509 certificate, hashed using SHA-1. The Data Forms field representing such a value is "x509_fingerprint_sha1".

Listing 113: X.509 Fingerprint (SHA-1)

```
<field var='x509_fingerprint_sha1'>
  <value>C3 88 33 27 F3 47 3B 8B 07 71 3E 96 44 A7 EE E2 E0 50 4A 5B
value>
</field>
```

6.11 Personal Favorites

Most people have favorite movies, authors, TV shows, musical artists, foods, games, etc.

6.11.1 Favorite Authors

The Data Forms field that represents favorite authors is "fav_authors". This field does not map to data in vCard or any other profile representation format.

Listing 114: Favorite Authors

```
<field var='fav_authors'>
    <value>Jacob Bronowski</value>
    <value>Friedrich Nietzsche</value>
    <value>Carroll Quigley</value>
    <value>Yevgeny Zamyatin</value>
</field>
```

6.11.2 Favorite Athletes

The Data Forms field that represents favorite athletes is "fav_athletes". This field does not map to data in vCard or any other profile representation format.

Listing 115: Favorite Athletes

```
<field var='fav_athletes'>
  <value>Lance Armstrong</value>
  <value>Andre Agassiz</value>
  </field>
```

6.11.3 Favorite Beverages

The Data Forms field that represents favorite beverages is "favorite_beverages". This field maps to:

- LDAP drink
- LDAP favoriteDrink

Listing 116: Favorite Beverages

```
<field var='favorite_beverages'>
    <value>Guinness</value>
</field>
```

6.11.4 Favorite Charities

The Data Forms field that represents favorite charities is "fav_charities". This field does not map to data in vCard or any other profile representation format.

Listing 117: Favorite Charities

```
<field var='fav_charities'>
  <value>Institute for Justice</value>
  <value>PERC</value>
</field>
```

6.11.5 Favorite Chatrooms

The Data Forms field that represents favorite chatrooms is "fav_chatrooms". This field does not map to data in vCard or any other profile representation format.

Listing 118: Favorite Chatrooms

```
<field var='fav_chatrooms'>
    <value>jabber@conference.jabber.org</value>
    <value>jdev@conference.jabber.org</value>
</field>
```

6.11.6 Favorite Drinks

The Data Forms field that represents favorite drinks is "fav_drinks". This field does not map to data in vCard or any other profile representation format.

Listing 119: Favorite Drinks

```
<field var='fav_drinks'>
  <value>Guinness</value>
</field>
```

6.11.7 Favorite Foods

The Data Forms field that represents favorite foods is "fav_foods". This field does not map to data in vCard or any other profile representation format.

Listing 120: Favorite Foods

6.11.8 Favorite Games

The Data Forms field that represents favorite games is "fav_games". This field does not map to data in vCard or any other profile representation format.

Listing 121: Favorite Games

6.11.9 Favorite Movies

The Data Forms field that represents favorite movies is "fav_movies". This field does not map to data in vCard or any other profile representation format.

Listing 122: Favorite Movies

```
<field var='fav_movies'>
  <value>In Search of Bobby Fischer</value>
  <value>Strictly Ballroom</value>
  <value>The Truth About Cats and Dogs</value>
  <value>Ray</value>
</field>
```

6.11.10 Favorite Music

The Data Forms field that represents favorite music is "fav_music". This field does not map to data in vCard or any other profile representation format.

Listing 123: Favorite Music

```
<field var='fav_music'>
    <value>J.S. Bach</value>
    <value>Duke Ellington</value>
    <value>Mellow Candle</value>
    <value>Yes</value>
    </field>
```

6.11.11 Favorite Quotes

A quote is a phrase or saying that a person identifies with in some way. According to the 2004 Pew Internet survey on instant messaging, quotes represent the most popular item to include in online profiles on major consumer-oriented instant messaging services.

The Data Forms field that represents favorite quotes is "fav_quotes".

This field does not map to data in vCard or any other profile representation format.

Listing 124: Favorite Quotes

```
<field var='fav_quotes'>
    <value>I am large, I contain multitudes.</value>
    <value>&quot; Think like a man of action, act like a man of thought.&
        quot; -{}-Henri Bergson</value>
        <value>One crowded hour of glorious life is worth an age without a
        name.</value>
</field>
```

6.11.12 Favorite Sports Teams

The Data Forms field that represents favorite sports teams is "fav_teams". This field does not map to data in vCard or any other profile representation format.

Listing 125: Favorite Sports Teams

```
<field var='fav_teams'>
    <value>New York Yankees</value>
    <value>Colorado Rockies</value>
</field>
```

6.11.13 Favorite TV Shows

The Data Forms field that represents favorite TV shows is "fav_tv". This field does not map to data in vCard or any other profile representation format.

Listing 126: Favorite TV Shows

6.12 Personal History

6.12.1 Places Lived

Some people move around a lot.

The Data Forms field that represents places lived is "places_lived".

This field does not map to data in vCard or any other profile representation format.

Listing 127: Places Lived

6.12.2 Schools Attended

The Data Forms field that represents schools attended is "schools".

This field does not map to data in vCard or any other profile representation format.

Listing 128: Schools Attended

```
<field var='schools'>
    <value>Columbia University</value>
    <value>American Renaissance School</value>
    <value>Maranacook Community School</value>
</field>
```

7 Security Considerations

Profile data can be personally significant and even security critical. Due care should be taken in determining who shall have access to such information. In particular, an entity SHOULD ensure that its public profile contains only information that it deems safe to be world-readable, SHOULD ensure that any pubsub node it may create for profile data has an access model of "presence" or "roster", and SHOULD NOT publish private or restricted data except to such a pubsub node.

8 IANA Considerations

This document requires no interaction with the Internet Assigned Numbers Authority (IANA)

9 XMPP Registrar Considerations

9.1 Protocol Namespaces

Until this specification advances to a status of Draft, its associated namespace shall be "urn:xmpp:tmp:profile"; upon advancement of this specification, the XMPP Registrar ⁴⁰ shall issue a permanent namespace in accordance with the process defined in Section 4 of XMPP Registrar Function (XEP-0053) ⁴¹.

9.2 Field Standardization

To follow.

10 XML Schema

```
<?xml version='1.0' encoding='UTF-8'?>
<xs:schema
    xmlns:xs='http://www.w3.org/2001/XMLSchema'</pre>
```

³⁹The Internet Assigned Numbers Authority (IANA) is the central coordinator for the assignment of unique parameter values for Internet protocols, such as port numbers and URI schemes. For further information, see http://www.iana.org/.

⁴⁰The XMPP Registrar maintains a list of reserved protocol namespaces as well as registries of parameters used in the context of XMPP extension protocols approved by the XMPP Standards Foundation. For further information, see https://xmpp.org/registrar/.

⁴¹XEP-0053: XMPP Registrar Function https://xmpp.org/extensions/xep-0053.html.

```
targetNamespace='urn:xmpp:tmp:profile'
xmlns='urn:xmpp:tmp:profile'
elementFormDefault='qualified'>

<xs:import
    namespace='jabber:x:data'
    schemaLocation='http://www.xmpp.org/schemas/x-data.xsd'/>

<xs:element name='profile'>
    <xs:complexType>
    <xs:sequence xmlns:data='jabber:x:data'>
         <xs:element ref='data:x'/>
         </xs:sequence>
    </xs:complexType>
</xs:complexType>
</xs:schema>
```