Schema documentation
for lter-personnelDB.xsd

february 25, 2011

Table of Contents

Schema(s)

Main schema `lter-personnelDB.xsd`

Annotations	This schema defines a data exchange standard for the LTER personnel database developed by the LTER Web Services Working Group. Each personnel document must include one or more person elements describing the identifying information, roles and contact information for an individual associated with the LTER Network.Working group participants include: Mason Kortz (chair; CCE/PAL), Sven Bohm (KBS), M. Gastil Buhl (MCR), Corinna Gries (NTL), Wade Sheldon (GCE) and Jonathan Walsh (BES).Copyright 2011 Long Term Ecological Research Network.

Properties	attribute form default: `unqualified`
	element form default: `unqualified`

Element(s)

Element `personnel`

Annotations	This is the root element of an lter-personnelDB document.
Diagram	 personnel ⊖ — ⊟⊟ ⊖ — 1..∞ — person ⊕ This is the root element of an lter-personnelDB document. The person element contains the database identifier, identity information, roles and contact information for one or...
Properties	content: `complex`
Model	person+
Children	person

`Instance`	`<personnel>`
	  `<person changeDate="">{1,unbounded}</person>`
	`</personnel>`

`Source`	```<xs:element name="personnel">``` `<xs:annotation>` `<xs:documentation>This is the root element of an lter-personnelDB document.</xs:documentation>` `</xs:annotation>` `<xs:complexType>` `<xs:sequence>` `<xs:element name="person" minOccurs="1" maxOccurs="unbounded">` `<xs:annotation>` `<xs:documentation>The person element contains the database identifier, identity information, roles and contact information for one or more individuals in the LTER Network. At least one person element is required.</xs:documentation>` `</xs:annotation>` `<xs:complexType>` `<xs:sequence>` `<xs:element name="personID" minOccurs="1" maxOccurs="1">` `<xs:annotation>` `<xs:documentation>The personID element contains an unsigned integer representing the database identifier for a personnel record in the LTER Database. This is a required element. When preparing data for submission specify a value of 0 to indicate a new entry or a non-zero entry to indicate an existing entry to update.</xs:documentation>`               `</xs:annotation>`               `<xs:simpleType>`                 `<xs:restriction base="xs:integer">`                   `<xs:minInclusive value="0"/>`                 `</xs:restriction>`               `</xs:simpleType>`             `</xs:element>`             `<xs:element name="identity" minOccurs="0" maxOccurs="1">`               `<xs:annotation>`                 `<xs:documentation>The identity element includes the primary identification information for an individual, including name, title and primary email address. Only 1 set of identity information is permitted per person element.</xs:documentation>`               `</xs:annotation>`               `<xs:complexType>`                 `<xs:sequence>`                   `<xs:element name="prefix" type="textField" minOccurs="0" maxOccurs="1">`                     `<xs:annotation>`                       `<xs:documentation>The prefix element contains a name prefix or salutation (e.g. Dr., Mr. or Ms.). This element is optional.</xs:documentation>`                     `</xs:annotation>`                   `</xs:element>`                   `<xs:element name="firstName" type="textField" minOccurs="1" maxOccurs="1">`                     `<xs:annotation>`                       `<xs:documentation>The firstName element contains the first or given name of the person. This element is required.</xs:documentation>`                     `</xs:annotation>`                   `</xs:element>`                   `<xs:element name="middleName" type="textField" minOccurs="0" maxOccurs="1">`                     `<xs:annotation>`                       `<xs:documentation>The middleName element contains the middle name of the person. This element is optional.</xs:documentation>`                     `</xs:annotation>`

```
                    </xs:element>
                    <xs:element name="lastName" type="textField" minOccurs="1"
maxOccurs="1">
                       <xs:annotation>
                         <xs:documentation>The lastName element contains the last or surname
of the person. This element is required.</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="suffix" type="textField" minOccurs="0" maxOccurs="1">
                       <xs:annotation>
                         <xs:documentation>The suffix element contains the name suffix of the
person (e.g. Jr., III). This element is optional.</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="preferredName" type="textField" minOccurs="0"
maxOccurs="1">
                       <xs:annotation>
                         <xs:documentation>The preferredName element contains the nickname
or other preferred variation of the person's full name. This element is optional.</
xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="title" type="textField" minOccurs="0" maxOccurs="1">
                       <xs:annotation>
                         <xs:documentation>The title element contains the institutional
or organizational title of the person (e.g. Assistant Professor, Institute of Applied
Ecology Director). This element is optional.</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="primaryEmail" type="emailAddress" minOccurs="1"
maxOccurs="1">
                       <xs:annotation>
                         <xs:documentation>The primaryEmail element contains the primary
contact email for use in LTER Network official communication. The LTER email alias will
reference this address. This is a required element.</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="optOut" type="xs:boolean" minOccurs="1" maxOccurs="1"
default="0">
                       <xs:annotation>
                         <xs:documentation>The optOut element contains a boolean value
specifying whether contact information other than name should be omitted from the
personnel directory list on the LTER web site. Acceptable values are true, false, 1 (i.e.
true) and 0 (i.e. false). This is a required element with a default value of 0 (false).</
xs:documentation>
                       </xs:annotation>
                    </xs:element>
                    <xs:element name="nameAlias" type="textField" minOccurs="0"
maxOccurs="unbounded">
                       <xs:annotation>
                         <xs:documentation>The nameAlias element contains alternative full
names under which the person is or has been known for use in directory searches (e.g.
name prior to marriage, divorce or name change). This is an optional element and it can
be repeated as necessary.</xs:documentation>
                       </xs:annotation>
                    </xs:element>
                 </xs:sequence>
               </xs:complexType>
            </xs:element>
            <xs:element name="roleList" minOccurs="0" maxOccurs="1">
               <xs:annotation>
                 <xs:documentation>The roleList element contains descriptions of LTER
Network roles held by the person at one or more LTER sites. This element is optional, but
it cannot be repeated more than once and if used then it must include one or more role
elements.</xs:documentation>
               </xs:annotation>
               <xs:complexType>
                 <xs:sequence>
                    <xs:element name="role" minOccurs="1" maxOccurs="unbounded">
                       <xs:annotation>
                         <xs:documentation>The role element contains elements describing a
LTER Network role held by the person. This is a required element that can be repeated as
many times as appropriate. Note that only one active role of type nsf should be assigned
per site for each person element.</xs:documentation>
                       </xs:annotation>
                       <xs:complexType>
                         <xs:sequence>
                            <xs:element name="roleID" minOccurs="1" maxOccurs="1">
                              <xs:annotation>
                                <xs:documentation>The roleID element contains an unsigned
integer representing the personnel database ID of the role record for a person. This is a
required element that cannot be repeated. For new roles to be added to the database, use
a roleID of 0.</xs:documentation>
```

```
                                    </xs:annotation>
                                    <xs:simpleType>
                                      <xs:restriction base="xs:integer">
                                        <xs:minInclusive value="0"/>
                                      </xs:restriction>
                                    </xs:simpleType>
                                  </xs:element>
                                  <xs:element name="roleType" minOccurs="1" maxOccurs="1">
                                    <xs:annotation>
                                      <xs:documentation>The roleType element contains a role type
from a controlled vocabularly of NSF roles or local roles defined in the LTER Personnel
Database. This is a required element that cannot be repeated.</xs:documentation>
                                    </xs:annotation>
                                    <xs:complexType>
                                      <xs:simpleContent>
                                        <xs:extension base="textField">
                                          <xs:attribute name="type" use="required">
                                            <xs:annotation>
                                              <xs:documentation>The type attribute specifies
the type or scope of the roleType. Allowed values are "nsf" for pre-defined NSF roles
and "local" for site-defined and network-wide roles in the Personnel Database.</
xs:documentation>
                                            </xs:annotation>
                                            <xs:simpleType>
                                              <xs:restriction base="xs:string">
                                                <xs:enumeration value="nsf"/>
                                                <xs:enumeration value="local"/>
                                              </xs:restriction>
                                            </xs:simpleType>
                                          </xs:attribute>
                                        </xs:extension>
                                      </xs:simpleContent>
                                    </xs:complexType>
                                  </xs:element>
                                  <xs:element name="siteAcronym" minOccurs="1" maxOccurs="1">
                                    <xs:annotation>
                                      <xs:documentation>The siteAcronym element contains a 3-letter
acronym specifying the LTER site at which the person holds this role. For network-wide
roles not associated with a specific site, use the siteAcronym NWK. This is a required
element that cannot be repeated.</xs:documentation>
                                    </xs:annotation>
                                    <xs:simpleType>
                                      <xs:restriction base="xs:string">
                                        <xs:length value="3"/>
                                      </xs:restriction>
                                    </xs:simpleType>
                                  </xs:element>
                                  <xs:element name="beginDate" type="xs:date" minOccurs="0"
maxOccurs="1">
                                    <xs:annotation>
                                      <xs:documentation>The beginDate element contains the beginning
date of the person's participation in the role. This element is optional but highly
recommended when known.</xs:documentation>
                                    </xs:annotation>
                                  </xs:element>
                                  <xs:element name="endDate" type="xs:date" minOccurs="0"
maxOccurs="1">
                                    <xs:annotation>
                                      <xs:documentation>The endDate element contains the ending
date of the person's participation in the role. This element is optional but highly
recommended when known, and should agree with the value of the isActive element value
(i.e. endDate in the past when isActive = false, endDate empty or in the future when
isActive = true).</xs:documentation>
                                    </xs:annotation>
                                  </xs:element>
                                  <xs:element name="isActive" type="xs:boolean" minOccurs="1"
maxOccurs="1">
                                    <xs:annotation>
                                      <xs:documentation>The isActive element contains a boolean
value indicating whether or not the person is currently active in the role. Possible
values are true, false, 1 (i.e. true) or 0 (i.e. false). This element is required, and
note that only one combination of roleType and siteAcronym should have isActive of true
for the same person. Note that this element takes precedence over endDate for determining
status of the role if they disagree.</xs:documentation>
                                    </xs:annotation>
                                  </xs:element>
                                </xs:sequence>
                              </xs:complexType>
                            </xs:element>
                          </xs:sequence>
                        </xs:complexType>
                      </xs:element>
                      <xs:element name="contactInfoList" minOccurs="0" maxOccurs="1">
```

```
                    <xs:annotation>
                      <xs:documentation>The contactInfoList element contains one or more sets of
contact information for the person. This element is optional, but if included cannot be
repeated and must include at least one contactInfo element.</xs:documentation>
                    </xs:annotation>
                    <xs:complexType>
                      <xs:sequence>
                        <xs:element name="contactInfo" minOccurs="1" maxOccurs="unbounded">
                          <xs:annotation>
                            <xs:documentation>The contactInfo element contains one set of
contact information for the person, including a descriptive label element and isPrimary
boolean element specifying which set of contact information should be used for official
LTER communication.</xs:documentation>
                          </xs:annotation>
                          <xs:complexType>
                            <xs:sequence>
                              <xs:element name="contactInfoID">
                                <xs:annotation>
                                  <xs:documentation>The contactInfoID element contains an
unsigned integer representing the LTER Personnel Database ID of the contact information
record. This is a required element. For new sets of contact information, specify 0 for
contactInfoID.</xs:documentation>
                                </xs:annotation>
                                <xs:simpleType>
                                  <xs:restriction base="xs:integer">
                                    <xs:minInclusive value="0"/>
                                  </xs:restriction>
                                </xs:simpleType>
                              </xs:element>
                              <xs:element name="label" type="textField" minOccurs="1"
maxOccurs="1">
                                <xs:annotation>
                                  <xs:documentation>The label element contains a descriptive
text label describing the set of contact information for the person (e.g. Primary
institutional contact information, Field station address during the summer). This label
is intended to convey information to end-users of the LTER directory regarding which
contact information is appropriate to use under different circumstances. This is a
required element.</xs:documentation>
                                </xs:annotation>
                              </xs:element>
                              <xs:element name="isPrimary" type="xs:boolean" minOccurs="1"
maxOccurs="1">
                                <xs:annotation>
                                  <xs:documentation>The isPrimary element contains a boolean
value specifying whether the contact information represents the primary address of the
person for official LTER communication. Possible values are true, false, 1 (i.e. true)
and 0 (i.e. false). This is a required element.</xs:documentation>
                                </xs:annotation>
                              </xs:element>
                              <xs:element name="beginDate" type="xs:date" minOccurs="0"
maxOccurs="1">
                                <xs:annotation>
                                  <xs:documentation>The beginDate element contains the beginning
date for the respective contact information. This element is optional but highly
recommended when known.</xs:documentation>
                                </xs:annotation>
                              </xs:element>
                              <xs:element name="endDate" type="xs:date" minOccurs="0"
maxOccurs="1">
                                <xs:annotation>
                                  <xs:documentation>The endDate element contains the ending date
for the respective contact information. This element is optional but highly recommended
when known, and should agree with the value of the isActive element value (i.e. endDate
in the past when isActive = false, endDate empty or in the future when isActive =
true).</xs:documentation>
                                </xs:annotation>
                              </xs:element>
                              <xs:element name="isActive" type="xs:boolean" minOccurs="1"
maxOccurs="1">
                                <xs:annotation>
                                  <xs:documentation>The isActive element contains a boolean
value indicating whether or not the contact information is currently active. Possible
values are true, false, 1 (i.e. true) and 0 (i.e. false). This is a required element.</
xs:documentation>
                                </xs:annotation>
                              </xs:element>
                              <xs:element name="address" type="textField" minOccurs="0"
maxOccurs="unbounded">
                                <xs:annotation>
                                  <xs:documentation>The address element contains the delivery
address for the person (e.g. street address). This element is optional and can be
repeated for multiple address lines.</xs:documentation>
                                </xs:annotation>
```

```
                              </xs:element>
                              <xs:element name="institution" type="textField" minOccurs="0"
maxOccurs="1">
                                  <xs:annotation>
                                   <xs:documentation>The institution element contains the name
of the institution or organization at which the person is located. This element is
optional.</xs:documentation>
                                  </xs:annotation>
                              </xs:element>
                              <xs:element name="city" type="textField" minOccurs="0"
maxOccurs="1">
                                  <xs:annotation>
                                   <xs:documentation>The city element contains the name of the
city in which the person resides. This element is optional.</xs:documentation>
                                  </xs:annotation>
                              </xs:element>
                              <xs:element name="administrativeArea" type="textField"
minOccurs="0" maxOccurs="1">
                                  <xs:annotation>
                                   <xs:documentation>The administativeArea contains the
name of the state, province or other adminstrative area. This element is optional.</
xs:documentation>
                                  </xs:annotation>
                              </xs:element>
                              <xs:element name="postalCode" type="textField" minOccurs="0"
maxOccurs="1">
                                  <xs:annotation>
                                   <xs:documentation>The postalCode element contains the Zip code
or other postal code for the address. This element is optional.</xs:documentation>
                                  </xs:annotation>
                              </xs:element>
                              <xs:element name="country" type="textField" minOccurs="0"
maxOccurs="1">
                                  <xs:annotation>
                                   <xs:documentation>The country element contains the name of the
country in which the person resides. This element is optional.</xs:documentation>
                                  </xs:annotation>
                              </xs:element>
                              <xs:element name="phone" type="textField" minOccurs="0"
maxOccurs="unbounded">
                                  <xs:annotation>
                                   <xs:documentation>The phone element contains a voice phone or
pager number at which the person can be reached. This is an optional element that can be
repeated as many times as appropriate.</xs:documentation>
                                  </xs:annotation>
                              </xs:element>
                              <xs:element name="fax" type="textField" minOccurs="0"
maxOccurs="unbounded">
                                  <xs:annotation>
                                   <xs:documentation>The fax contains the number of a fax (i.e.
facsimile) machine that can be used to send documents to the person. This is an optional
element that can be repeated as many times as appropriate.</xs:documentation>
                                  </xs:annotation>
                              </xs:element>
                              <xs:element name="email" type="emailAddress" minOccurs="0"
maxOccurs="unbounded">
                                  <xs:annotation>
                                   <xs:documentation>The email element contains additional
electronic mail addresses that can be used to contact the perosn. This is an optional
element that can be repeated as many times as appropriate.</xs:documentation>
                                  </xs:annotation>
                              </xs:element>
                          </xs:sequence>
                        </xs:complexType>
                      </xs:element>
                  </xs:sequence>
               </xs:complexType>
            </xs:element>
         </xs:sequence>
         <xs:attribute name="changeDate" type="xs:date">
            <xs:annotation>
               <xs:documentation>The changeDate attribute lists the date any content in the
personnel record was last modified. This is a read-only attribute that will be ignored
when submitting or updating personnel information in the database.</xs:documentation>
            </xs:annotation>
         </xs:attribute>
      </xs:complexType>
   </xs:element>
   </xs:sequence>
  </xs:complexType>
</xs:element>
```

Element `personnel / person`

Annotations	The person element contains the database identifier, identity information, roles and contact information for one or more individuals in the LTER Network. At least one person element is required.
Diagram	

Properties		
	content:	complex
	minOccurs:	1
	maxOccurs:	unbounded

Model	personID , identity{0,1} , roleList{0,1} , contactInfoList{0,1}
Children	contactInfoList, identity, personID, roleList

Instance
| ```
<person changeDate="">
  <personID>{1,1}</personID>
  <identity>{0,1}</identity>
  <roleList>{0,1}</roleList>
  <contactInfoList>{0,1}</contactInfoList>
</person>
``` |

Attributes	QName	Type	Fixed	Default	Use
	changeDate	xs:date			optional
	The changeDate attribute lists the date any content in the personnel record was last modified. This is a read-only attribute that will be ignored when submitting or updating personnel information in the database.				

Source
| ```
<xs:element name="person" minOccurs="1" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>The person element contains the database identifier, identity
information, roles and contact information for one or more individuals in the LTER
Network. At least one person element is required.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="personID" minOccurs="1" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The personID element contains an unsigned integer representing
the database identifier for a personnel record in the LTER Database. This is a required
element. When preparing data for submission specify a value of 0 to indicate a new entry
or a non-zero entry to indicate an existing entry to update.</xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="identity" minOccurs="0" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The identity element includes the primary identification
information for an individual, including name, title and primary email address. Only 1
set of identity information is permitted per person element.</xs:documentation>
``` |

```
            </xs:annotation>
          <xs:complexType>
            <xs:sequence>
              <xs:element name="prefix" type="textField" minOccurs="0" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The prefix element contains a name prefix or salutation
(e.g. Dr., Mr. or Ms.). This element is optional.</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="firstName" type="textField" minOccurs="1" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The firstName element contains the first or given name
of the person. This element is required.</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="middleName" type="textField" minOccurs="0" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The middleName element contains the middle name of the
person. This element is optional.</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="lastName" type="textField" minOccurs="1" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The lastName element contains the last or surname of the
person. This element is required.</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="suffix" type="textField" minOccurs="0" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The suffix element contains the name suffix of the
person (e.g. Jr., III). This element is optional.</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="preferredName" type="textField" minOccurs="0" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The preferredName element contains the nickname
or other preferred variation of the person's full name. This element is optional.</
xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="title" type="textField" minOccurs="0" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The title element contains the institutional or
organizational title of the person (e.g. Assistant Professor, Institute of Applied
Ecology Director). This element is optional.</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="primaryEmail" type="emailAddress" minOccurs="1"
maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The primaryEmail element contains the primary contact
email for use in LTER Network official communication. The LTER email alias will reference
this address. This is a required element.</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="optOut" type="xs:boolean" minOccurs="1" maxOccurs="1"
default="0">
                <xs:annotation>
                  <xs:documentation>The optOut element contains a boolean value specifying
whether contact information other than name should be omitted from the personnel
directory list on the LTER web site. Acceptable values are true, false, 1 (i.e. true)
and 0 (i.e. false). This is a required element with a default value of 0 (false).</
xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="nameAlias" type="textField" minOccurs="0"
maxOccurs="unbounded">
                <xs:annotation>
                  <xs:documentation>The nameAlias element contains alternative full names
under which the person is or has been known for use in directory searches (e.g. name
prior to marriage, divorce or name change). This is an optional element and it can be
repeated as necessary.</xs:documentation>
                </xs:annotation>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="roleList" minOccurs="0" maxOccurs="1">
          <xs:annotation>
            <xs:documentation>The roleList element contains descriptions of LTER Network
roles held by the person at one or more LTER sites. This element is optional, but it
cannot be repeated more than once and if used then it must include one or more role
elements.</xs:documentation>
```

```xml
          </xs:annotation>
      <xs:complexType>
        <xs:sequence>
          <xs:element name="role" minOccurs="1" maxOccurs="unbounded">
            <xs:annotation>
              <xs:documentation>The role element contains elements describing a LTER
Network role held by the person. This is a required element that can be repeated as many
times as appropriate. Note that only one active role of type nsf should be assigned per
site for each person element.</xs:documentation>
            </xs:annotation>
            <xs:complexType>
              <xs:sequence>
                <xs:element name="roleID" minOccurs="1" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>The roleID element contains an unsigned integer
representing the personnel database ID of the role record for a person. This is a
required element that cannot be repeated. For new roles to be added to the database, use
a roleID of 0.</xs:documentation>
                  </xs:annotation>
                  <xs:simpleType>
                    <xs:restriction base="xs:integer">
                      <xs:minInclusive value="0"/>
                    </xs:restriction>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="roleType" minOccurs="1" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>The roleType element contains a role type from
a controlled vocabulary of NSF roles or local roles defined in the LTER Personnel
Database. This is a required element that cannot be repeated.</xs:documentation>
                  </xs:annotation>
                  <xs:complexType>
                    <xs:simpleContent>
                      <xs:extension base="textField">
                        <xs:attribute name="type" use="required">
                          <xs:annotation>
                            <xs:documentation>The type attribute specifies the type or
scope of the roleType. Allowed values are "nsf" for pre-defined NSF roles and "local" for
site-defined and network-wide roles in the Personnel Database.</xs:documentation>
                          </xs:annotation>
                          <xs:simpleType>
                            <xs:restriction base="xs:string">
                              <xs:enumeration value="nsf"/>
                              <xs:enumeration value="local"/>
                            </xs:restriction>
                          </xs:simpleType>
                        </xs:attribute>
                      </xs:extension>
                    </xs:simpleContent>
                  </xs:complexType>
                </xs:element>
                <xs:element name="siteAcronym" minOccurs="1" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>The siteAcronym element contains a 3-letter
acronym specifying the LTER site at which the person holds this role. For network-wide
roles not associated with a specific site, use the siteAcronym NWK. This is a required
element that cannot be repeated.</xs:documentation>
                  </xs:annotation>
                  <xs:simpleType>
                    <xs:restriction base="xs:string">
                      <xs:length value="3"/>
                    </xs:restriction>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="beginDate" type="xs:date" minOccurs="0" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>The beginDate element contains the beginning
date of the person's participation in the role. This element is optional but highly
recommended when known.</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="endDate" type="xs:date" minOccurs="0" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>The endDate element contains the ending date of
the person's participation in the role. This element is optional but highly recommended
when known, and should agree with the value of the isActive element value (i.e. endDate
in the past when isActive = false, endDate empty or in the future when isActive =
true).</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="isActive" type="xs:boolean" minOccurs="1"
maxOccurs="1">
                  <xs:annotation>
```

```
                                    <xs:documentation>The isActive element contains a boolean value
indicating whether or not the person is currently active in the role. Possible values
are true, false, 1 (i.e. true) or 0 (i.e. false). This element is required, and note that
only one combination of roleType and siteAcronym should have isActive of true for the
same person. Note that this element takes precedence over endDate for determining status
of the role if they disagree.</xs:documentation>
                                </xs:annotation>
                            </xs:element>
                        </xs:sequence>
                    </xs:complexType>
                </xs:element>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="contactInfoList" minOccurs="0" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The contactInfoList element contains one or more sets of
contact information for the person. This element is optional, but if included cannot be
repeated and must include at least one contactInfo element.</xs:documentation>
        </xs:annotation>
        <xs:complexType>
          <xs:sequence>
            <xs:element name="contactInfo" minOccurs="1" maxOccurs="unbounded">
              <xs:annotation>
                <xs:documentation>The contactInfo element contains one set of contact
information for the person, including a descriptive label element and isPrimary boolean
element specifying which set of contact information should be used for official LTER
communication.</xs:documentation>
              </xs:annotation>
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="contactInfoID">
                    <xs:annotation>
                      <xs:documentation>The contactInfoID element contains an unsigned
integer representing the LTER Personnel Database ID of the contact information
record. This is a required element. For new sets of contact information, specify 0 for
contactInfoID.</xs:documentation>
                    </xs:annotation>
                    <xs:simpleType>
                      <xs:restriction base="xs:integer">
                        <xs:minInclusive value="0"/>
                      </xs:restriction>
                    </xs:simpleType>
                  </xs:element>
                  <xs:element name="label" type="textField" minOccurs="1" maxOccurs="1">
                    <xs:annotation>
                      <xs:documentation>The label element contains a descriptive
text label describing the set of contact information for the person (e.g. Primary
institutional contact information, Field station address during the summer). This label
is intended to convey information to end-users of the LTER directory regarding which
contact information is appropriate to use under different circumstances. This is a
required element.</xs:documentation>
                    </xs:annotation>
                  </xs:element>
                  <xs:element name="isPrimary" type="xs:boolean" minOccurs="1"
maxOccurs="1">
                    <xs:annotation>
                      <xs:documentation>The isPrimary element contains a boolean value
specifying whether the contact information represents the primary address of the person
for official LTER communication. Possible values are true, false, 1 (i.e. true) and 0
(i.e. false). This is a required element.</xs:documentation>
                    </xs:annotation>
                  </xs:element>
                  <xs:element name="beginDate" type="xs:date" minOccurs="0" maxOccurs="1">
                    <xs:annotation>
                      <xs:documentation>The beginDate element contains the beginning date
for the respective contact information. This element is optional but highly recommended
when known.</xs:documentation>
                    </xs:annotation>
                  </xs:element>
                  <xs:element name="endDate" type="xs:date" minOccurs="0" maxOccurs="1">
                    <xs:annotation>
                      <xs:documentation>The endDate element contains the ending date for
the respective contact information. This element is optional but highly recommended when
known, and should agree with the value of the isActive element value (i.e. endDate in
the past when isActive = false, endDate empty or in the future when isActive = true).</
xs:documentation>
                    </xs:annotation>
                  </xs:element>
                  <xs:element name="isActive" type="xs:boolean" minOccurs="1"
maxOccurs="1">
                    <xs:annotation>
```

```
                              <xs:documentation>The isActive element contains a boolean value
indicating whether or not the contact information is currently active. Possible values
are true, false, 1 (i.e. true) and 0 (i.e. false). This is a required element.</
xs:documentation>
                         </xs:annotation>
                       </xs:element>
                       <xs:element name="address" type="textField" minOccurs="0"
maxOccurs="unbounded">
                         <xs:annotation>
                           <xs:documentation>The address element contains the delivery address
for the person (e.g. street address). This element is optional and can be repeated for
multiple address lines.</xs:documentation>
                         </xs:annotation>
                       </xs:element>
                       <xs:element name="institution" type="textField" minOccurs="0"
maxOccurs="1">
                         <xs:annotation>
                           <xs:documentation>The institution element contains the name of the
institution or organization at which the person is located. This element is optional.</
xs:documentation>
                         </xs:annotation>
                       </xs:element>
                       <xs:element name="city" type="textField" minOccurs="0" maxOccurs="1">
                         <xs:annotation>
                           <xs:documentation>The city element contains the name of the city in
which the person resides. This element is optional.</xs:documentation>
                         </xs:annotation>
                       </xs:element>
                       <xs:element name="administrativeArea" type="textField" minOccurs="0"
maxOccurs="1">
                         <xs:annotation>
                           <xs:documentation>The administativeArea contains the name of the
state, province or other adminstrative area. This element is optional.</xs:documentation>
                         </xs:annotation>
                       </xs:element>
                       <xs:element name="postalCode" type="textField" minOccurs="0"
maxOccurs="1">
                         <xs:annotation>
                           <xs:documentation>The postalCode element contains the Zip code or
other postal code for the address. This element is optional.</xs:documentation>
                         </xs:annotation>
                       </xs:element>
                       <xs:element name="country" type="textField" minOccurs="0" maxOccurs="1">
                         <xs:annotation>
                           <xs:documentation>The country element contains the name of the
country in which the person resides. This element is optional.</xs:documentation>
                         </xs:annotation>
                       </xs:element>
                       <xs:element name="phone" type="textField" minOccurs="0"
maxOccurs="unbounded">
                         <xs:annotation>
                           <xs:documentation>The phone element contains a voice phone or
pager number at which the person can be reached. This is an optional element that can be
repeated as many times as appropriate.</xs:documentation>
                         </xs:annotation>
                       </xs:element>
                       <xs:element name="fax" type="textField" minOccurs="0"
maxOccurs="unbounded">
                         <xs:annotation>
                           <xs:documentation>The fax contains the number of a fax (i.e.
facsimile) machine that can be used to send documents to the person. This is an optional
element that can be repeated as many times as appropriate.</xs:documentation>
                         </xs:annotation>
                       </xs:element>
                       <xs:element name="email" type="emailAddress" minOccurs="0"
maxOccurs="unbounded">
                         <xs:annotation>
                           <xs:documentation>The email element contains additional electronic
mail addresses that can be used to contact the perosn. This is an optional element that
can be repeated as many times as appropriate.</xs:documentation>
                         </xs:annotation>
                       </xs:element>
                     </xs:sequence>
                   </xs:complexType>
                 </xs:element>
               </xs:sequence>
             </xs:complexType>
           </xs:element>
         </xs:sequence>
         <xs:attribute name="changeDate" type="xs:date">
           <xs:annotation>
```
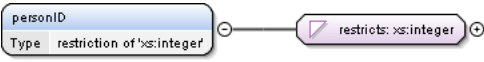
```
        <xs:documentation>The changeDate attribute lists the date any content in the
personnel record was last modified. This is a read-only attribute that will be ignored
when submitting or updating personnel information in the database.</xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:complexType>
</xs:element>
```

Element `personnel / person / personID`

Annotations	The personID element contains an unsigned integer representing the database identifier for a personnel record in the LTER Database. This is a required element. When preparing data for submission specify a value of 0 to indicate a new entry or a non-zero entry to indicate an existing entry to update.
Diagram	personID Type restriction of 'xs:integer' restricts: xs:integer The personID element contains an unsigned integer representing the database identifier for a personnel record in the…
Type	restriction of xs:integer
Properties	content: simple
	minOccurs: 1
	maxOccurs: 1
Source	`<xs:element name="personID" minOccurs="1" maxOccurs="1">` `  <xs:annotation>` ` <xs:documentation>The personID element contains an unsigned integer representing the database identifier for a personnel record in the LTER Database. This is a required element. When preparing data for submission specify a value of 0 to indicate a new entry or a non-zero entry to indicate an existing entry to update.</xs:documentation>` ` </xs:annotation>` ` <xs:simpleType>` ` <xs:restriction base="xs:integer">` ` <xs:minInclusive value="0"/>` ` </xs:restriction>` ` </xs:simpleType>` `</xs:element>`

Element `personnel / person / identity`

Annotations	The identity element includes the primary identification information for an individual, including name, title and primary email address. Only 1 set of identity information is permitted per person element.

Diagram	
Properties	content: `complex`
	minOccurs: 0
	maxOccurs: 1
Model	prefix{0,1} , firstName , middleName{0,1} , lastName , suffix{0,1} , preferredName{0,1} , title{0,1} , primaryEmail , optOut , nameAlias*
Children	firstName, lastName, middleName, nameAlias, optOut, preferredName, prefix, primaryEmail, suffix, title
| Instance | ```
<identity>
  <prefix>{0,1}</prefix>
  <firstName>{1,1}</firstName>
  <middleName>{0,1}</middleName>
  <lastName>{1,1}</lastName>
  <suffix>{0,1}</suffix>
  <preferredName>{0,1}</preferredName>
  <title>{0,1}</title>
  <primaryEmail>{1,1}</primaryEmail>
  <optOut>{1,1}</optOut>
  <nameAlias>{0,unbounded}</nameAlias>
</identity>
``` |
| Source | ```
<xs:element name="identity" minOccurs="0" maxOccurs="1">
  <xs:annotation>
``` |

```
      <xs:documentation>The identity element includes the primary identification information
for an individual, including name, title and primary email address. Only 1 set of
identity information is permitted per person element.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="prefix" type="textField" minOccurs="0" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The prefix element contains a name prefix or salutation (e.g.
Dr., Mr. or Ms.). This element is optional.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="firstName" type="textField" minOccurs="1" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The firstName element contains the first or given name of the
person. This element is required.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="middleName" type="textField" minOccurs="0" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The middleName element contains the middle name of the person.
This element is optional.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="lastName" type="textField" minOccurs="1" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The lastName element contains the last or surname of the
person. This element is required.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="suffix" type="textField" minOccurs="0" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The suffix element contains the name suffix of the person
(e.g. Jr., III). This element is optional.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="preferredName" type="textField" minOccurs="0" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The preferredName element contains the nickname or
other preferred variation of the person's full name. This element is optional.</
xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="title" type="textField" minOccurs="0" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The title element contains the institutional or organizational
title of the person (e.g. Assistant Professor, Institute of Applied Ecology Director).
This element is optional.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="primaryEmail" type="emailAddress" minOccurs="1" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The primaryEmail element contains the primary contact email
for use in LTER Network official communication. The LTER email alias will reference this
address. This is a required element.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="optOut" type="xs:boolean" minOccurs="1" maxOccurs="1" default="0">
        <xs:annotation>
          <xs:documentation>The optOut element contains a boolean value specifying whether
contact information other than name should be omitted from the personnel directory
list on the LTER web site. Acceptable values are true, false, 1 (i.e. true) and 0 (i.e.
false). This is a required element with a default value of 0 (false).</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="nameAlias" type="textField" minOccurs="0" maxOccurs="unbounded">
        <xs:annotation>
          <xs:documentation>The nameAlias element contains alternative full names under
which the person is or has been known for use in directory searches (e.g. name prior to
marriage, divorce or name change). This is an optional element and it can be repeated as
necessary.</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

Element `personnel / person / identity / prefix`

Annotations	The prefix element contains a name prefix or salutation (e.g. Dr., Mr. or Ms.). This element is optional.

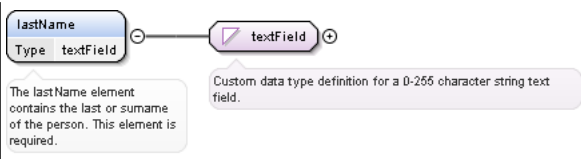| Diagram	
Type	textField
Properties	content: `simple`
	minOccurs: 0
	maxOccurs: 1

Source	`<xs:element name="prefix" type="textField" minOccurs="0" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>The prefix element contains a name prefix or salutation (e.g. Dr., Mr. or Ms.). This element is optional.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element personnel / person / identity / firstName

Annotations	The firstName element contains the first or given name of the person. This element is required.
Diagram	
Type	textField
Properties	content: `simple`
	minOccurs: 1
	maxOccurs: 1

Source	`<xs:element name="firstName" type="textField" minOccurs="1" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>The firstName element contains the first or given name of the person. This element is required.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element personnel / person / identity / middleName

Annotations	The middleName element contains the middle name of the person. This element is optional.
Diagram	
Type	textField
Properties	content: `simple`
	minOccurs: 0
	maxOccurs: 1

Source	`<xs:element name="middleName" type="textField" minOccurs="0" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>The middleName element contains the middle name of the person. This element is optional.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element personnel / person / identity / lastName

Annotations	The lastName element contains the last or surname of the person. This element is required.

Diagram	
Type	textField
Properties	content: simple
	minOccurs: 1
	maxOccurs: 1

Source	`<xs:element name="lastName" type="textField" minOccurs="1" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>The lastName element contains the last or surname of the person. This element is required.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel / person / identity / suffix`

Annotations	The suffix element contains the name suffix of the person (e.g. Jr., III). This element is optional.
Diagram	
Type	textField
Properties	content: simple
	minOccurs: 0
	maxOccurs: 1

Source	`<xs:element name="suffix" type="textField" minOccurs="0" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>The suffix element contains the name suffix of the person (e.g. Jr., III). This element is optional.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel / person / identity / preferredName`

Annotations	The preferredName element contains the nickname or other preferred variation of the person's full name. This element is optional.
Diagram	
Type	textField
Properties	content: simple
	minOccurs: 0
	maxOccurs: 1

Source	`<xs:element name="preferredName" type="textField" minOccurs="0" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>The preferredName element contains the nickname or other preferred variation of the person's full name. This element is optional.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel / person / identity / title`

Annotations	The title element contains the institutional or organizational title of the person (e.g. Assistant Professor, Institute of Applied Ecology Director). This element is optional.

Diagram	
Type	textField
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	```<xs:element name="title" type="textField" minOccurs="0" maxOccurs="1">```
	   ```<xs:annotation>```
	     ```<xs:documentation>```The title element contains the institutional or organizational title of the person (e.g. Assistant Professor, Institute of Applied Ecology Director). This element is optional.```</xs:documentation>```
	   ```</xs:annotation>```
	 ```</xs:element>```

Element `personnel / person / identity / primaryEmail`

Annotations	The primaryEmail element contains the primary contact email for use in LTER Network official communication. The LTER email alias will reference this address. This is a required element.
Diagram	
Type	emailAddress
Properties	content: simple minOccurs: 1 maxOccurs: 1

Source	```<xs:element name="primaryEmail" type="emailAddress" minOccurs="1" maxOccurs="1">```
	   ```<xs:annotation>```
	     ```<xs:documentation>```The primaryEmail element contains the primary contact email for use in LTER Network official communication. The LTER email alias will reference this address. This is a required element.```</xs:documentation>```
	   ```</xs:annotation>```
	 ```</xs:element>```

Element `personnel / person / identity / optOut`

Annotations	The optOut element contains a boolean value specifying whether contact information other than name should be omitted from the personnel directory list on the LTER web site. Acceptable values are true, false, 1 (i.e. true) and 0 (i.e. false). This is a required element with a default value of 0 (false).
Diagram	
Type	xs:boolean
Properties	content: simple minOccurs: 1 maxOccurs: 1 default: 0

Source	```<xs:element name="optOut" type="xs:boolean" minOccurs="1" maxOccurs="1" default="0">```
	   ```<xs:annotation>```
	     ```<xs:documentation>```The optOut element contains a boolean value specifying whether contact information other than name should be omitted from the personnel directory list on the LTER web site. Acceptable values are true, false, 1 (i.e. true) and 0 (i.e. false). This is a required element with a default value of 0 (false).```</xs:documentation>```

```
      </xs:annotation>
</xs:element>
```

Element `personnel / person / identity / nameAlias`

Annotations	The nameAlias element contains alternative full names under which the person is or has been known for use in directory searches (e.g. name prior to marriage, divorce or name change). This is an optional element and it can be repeated as necessary.
Diagram	 nameAlias Type textField The nameAlias element contains alternative full names under which the person is or has been known for use in directory… textField Custom data type definition for a 0-255 character string text field.
Type	textField
Properties	content: simple
	minOccurs: 0
	maxOccurs: unbounded

Source	`<xs:element name="nameAlias" type="textField" minOccurs="0" maxOccurs="unbounded">`
	`  <xs:annotation>`
	`    <xs:documentation>The nameAlias element contains alternative full names under which the person is or has been known for use in directory searches (e.g. name prior to marriage, divorce or name change). This is an optional element and it can be repeated as necessary.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `personnel / person / roleList`

Annotations	The roleList element contains descriptions of LTER Network roles held by the person at one or more LTER sites. This element is optional, but it cannot be repeated more than once and if used then it must include one or more role elements.
Diagram	 roleList The roleList element contains descriptions of LTER Network roles held by the person at one or more LTER sites. This… 1..∞ role The role element contains elements describing a LTER Network role held by the person. This is a required element that…
Properties	content: complex
	minOccurs: 0
	maxOccurs: 1
Model	role+
Children	role

Instance	`<roleList>`
	`  <role>{1,unbounded}</role>`
	`</roleList>`

Source	`<xs:element name="roleList" minOccurs="0" maxOccurs="1">` `  <xs:annotation>` `    <xs:documentation>The roleList element contains descriptions of LTER Network roles held by the person at one or more LTER sites. This element is optional, but it cannot be repeated more than once and if used then it must include one or more role elements.</xs:documentation>` `  </xs:annotation>` `  <xs:complexType>` `    <xs:sequence>` `      <xs:element name="role" minOccurs="1" maxOccurs="unbounded">` `        <xs:annotation>` ` <xs:documentation>The role element contains elements describing a LTER Network role held by the person. This is a required element that can be repeated as many times as appropriate. Note that only one active role of type nsf should be assigned per site for each person element.</xs:documentation>` ` </xs:annotation>` ` <xs:complexType>` ` <xs:sequence>` ` <xs:element name="roleID" minOccurs="1" maxOccurs="1">` ` <xs:annotation>`

```xml
                    <xs:documentation>The roleID element contains an unsigned integer
representing the personnel database ID of the role record for a person. This is a
required element that cannot be repeated. For new roles to be added to the database, use
a roleID of 0.</xs:documentation>
                </xs:annotation>
                <xs:simpleType>
                  <xs:restriction base="xs:integer">
                    <xs:minInclusive value="0"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="roleType" minOccurs="1" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The roleType element contains a role type from a
controlled vocabulary of NSF roles or local roles defined in the LTER Personnel
Database. This is a required element that cannot be repeated.</xs:documentation>
                </xs:annotation>
                <xs:complexType>
                  <xs:simpleContent>
                    <xs:extension base="textField">
                      <xs:attribute name="type" use="required">
                        <xs:annotation>
                          <xs:documentation>The type attribute specifies the type or scope
 of the roleType. Allowed values are "nsf" for pre-defined NSF roles and "local" for site-
defined and network-wide roles in the Personnel Database.</xs:documentation>
                        </xs:annotation>
                        <xs:simpleType>
                          <xs:restriction base="xs:string">
                            <xs:enumeration value="nsf"/>
                            <xs:enumeration value="local"/>
                          </xs:restriction>
                        </xs:simpleType>
                      </xs:attribute>
                    </xs:extension>
                  </xs:simpleContent>
                </xs:complexType>
              </xs:element>
              <xs:element name="siteAcronym" minOccurs="1" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The siteAcronym element contains a 3-letter acronym
specifying the LTER site at which the person holds this role. For network-wide roles not
associated with a specific site, use the siteAcronym NWK. This is a required element that
cannot be repeated.</xs:documentation>
                </xs:annotation>
                <xs:simpleType>
                  <xs:restriction base="xs:string">
                    <xs:length value="3"/>
                  </xs:restriction>
                </xs:simpleType>
              </xs:element>
              <xs:element name="beginDate" type="xs:date" minOccurs="0" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The beginDate element contains the beginning date of the
person's participation in the role. This element is optional but highly recommended when
known.</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="endDate" type="xs:date" minOccurs="0" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The endDate element contains the ending date of the
person's participation in the role. This element is optional but highly recommended when
known, and should agree with the value of the isActive element value (i.e. endDate in
the past when isActive = false, endDate empty or in the future when isActive = true).</
xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="isActive" type="xs:boolean" minOccurs="1" maxOccurs="1">
                <xs:annotation>
                  <xs:documentation>The isActive element contains a boolean value indicating
whether or not the person is currently active in the role. Possible values are true,
false, 1 (i.e. true) or 0 (i.e. false). This element is required, and note that only one
combination of roleType and siteAcronym should have isActive of true for the same person.
Note that this element takes precedence over endDate for determining status of the role
if they disagree.</xs:documentation>
                </xs:annotation>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
</xs:element>
```

Element `personnel / person / roleList / role`

Annotations	The role element contains elements describing a LTER Network role held by the person. This is a required element that can be repeated as many times as appropriate. Note that only one active role of type nsf should be assigned per site for each person element.
Diagram	

Properties		
	content:	complex
	minOccurs:	1
	maxOccurs:	unbounded

Model	roleID , roleType , siteAcronym , beginDate{0,1} , endDate{0,1} , isActive
Children	beginDate, endDate, isActive, roleID, roleType, siteAcronym

Instance	
| | ```xml
<role>
  <roleID>{1,1}</roleID>
  <roleType type="">{1,1}</roleType>
  <siteAcronym>{1,1}</siteAcronym>
  <beginDate>{0,1}</beginDate>
  <endDate>{0,1}</endDate>
  <isActive>{1,1}</isActive>
</role>
``` |

Source	
| | ```xml
<xs:element name="role" minOccurs="1" maxOccurs="unbounded">
  <xs:annotation>
    <xs:documentation>The role element contains elements describing a LTER Network role
held by the person. This is a required element that can be repeated as many times as
appropriate. Note that only one active role of type nsf should be assigned per site for
each person element.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="roleID" minOccurs="1" maxOccurs="1">
        <xs:annotation>
          <xs:documentation>The roleID element contains an unsigned integer representing
the personnel database ID of the role record for a person. This is a required element
that cannot be repeated. For new roles to be added to the database, use a roleID of 0.</
xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:element>
      <xs:element name="roleType" minOccurs="1" maxOccurs="1">
        <xs:annotation>
``` |

```
                    <xs:documentation>The roleType element contains a role type from a controlled
vocabularly of NSF roles or local roles defined in the LTER Personnel Database. This is a
required element that cannot be repeated.</xs:documentation>
              </xs:annotation>
              <xs:complexType>
                <xs:simpleContent>
                  <xs:extension base="textField">
                    <xs:attribute name="type" use="required">
                      <xs:annotation>
                        <xs:documentation>The type attribute specifies the type or scope of the
roleType. Allowed values are "nsf" for pre-defined NSF roles and "local" for site-defined
and network-wide roles in the Personnel Database.</xs:documentation>
                      </xs:annotation>
                      <xs:simpleType>
                        <xs:restriction base="xs:string">
                          <xs:enumeration value="nsf"/>
                          <xs:enumeration value="local"/>
                        </xs:restriction>
                      </xs:simpleType>
                    </xs:attribute>
                  </xs:extension>
                </xs:simpleContent>
              </xs:complexType>
            </xs:element>
            <xs:element name="siteAcronym" minOccurs="1" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The siteAcronym element contains a 3-letter acronym specifying
the LTER site at which the person holds this role. For network-wide roles not associated
with a specific site, use the siteAcronym NWK. This is a required element that cannot be
repeated.</xs:documentation>
              </xs:annotation>
              <xs:simpleType>
                <xs:restriction base="xs:string">
                  <xs:length value="3"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="beginDate" type="xs:date" minOccurs="0" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The beginDate element contains the beginning date of the
person's participation in the role. This element is optional but highly recommended when
known.</xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="endDate" type="xs:date" minOccurs="0" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The endDate element contains the ending date of the person's
participation in the role. This element is optional but highly recommended when known,
and should agree with the value of the isActive element value (i.e. endDate in the
past when isActive = false, endDate empty or in the future when isActive = true).</
xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="isActive" type="xs:boolean" minOccurs="1" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The isActive element contains a boolean value indicating
whether or not the person is currently active in the role. Possible values are true,
false, 1 (i.e. true) or 0 (i.e. false). This element is required, and note that only one
combination of roleType and siteAcronym should have isActive of true for the same person.
Note that this element takes precedence over endDate for determining status of the role
if they disagree.</xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
```

Element `personnel / person / roleList / role / roleID`

Annotations	The roleID element contains an unsigned integer representing the personnel database ID of the role record for a person. This is a required element that cannot be repeated. For new roles to be added to the database, use a roleID of 0.
Diagram	
Type	restriction of xs:integer

Properties	content:	simple
	minOccurs:	1
	maxOccurs:	1

| Source | ```
<xs:element name="roleID" minOccurs="1" maxOccurs="1">
  <xs:annotation>
    <xs:documentation>The roleID element contains an unsigned integer representing the
 personnel database ID of the role record for a person. This is a required element that
 cannot be repeated. For new roles to be added to the database, use a roleID of 0.</
xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="0"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
``` |
|---|---|

Element `personnel / person / roleList / role / roleType`

Annotations	The roleType element contains a role type from a controlled vocabularly of NSF roles or local roles defined in the LTER Personnel Database. This is a required element that cannot be repeated.
Diagram	
Type	extension of textField
Type hierarchy	• xs:string • textField

Properties	content:	complex
	minOccurs:	1
	maxOccurs:	1

Attributes	QName	Type	Fixed	Default	Use
	type	restriction of xs:string			required
		The type attribute specifies the type or scope of the roleType. Allowed values are "nsf" for pre-defined NSF roles and "local" for site-defined and network-wide roles in the Personnel Database.			

| Source | ```
<xs:element name="roleType" minOccurs="1" maxOccurs="1">
  <xs:annotation>
    <xs:documentation>The roleType element contains a role type from a controlled
 vocabularly of NSF roles or local roles defined in the LTER Personnel Database. This is a
 required element that cannot be repeated.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:simpleContent>
      <xs:extension base="textField">
        <xs:attribute name="type" use="required">
          <xs:annotation>
            <xs:documentation>The type attribute specifies the type or scope of the
 roleType. Allowed values are "nsf" for pre-defined NSF roles and "local" for site-defined
 and network-wide roles in the Personnel Database.</xs:documentation>
          </xs:annotation>
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="nsf"/>
              <xs:enumeration value="local"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:attribute>
      </xs:extension>
    </xs:simpleContent>
  </xs:complexType>
``` |
|---|---|

Element `personnel` / `person` / `roleList` / `role` / `siteAcronym`

Annotations	The siteAcronym element contains a 3-letter acronym specifying the LTER site at which the person holds this role. For network-wide roles not associated with a specific site, use the siteAcronym NWK. This is a required element that cannot be repeated.
Diagram	
Type	restriction of xs:string
Properties	content: simple minOccurs: 1 maxOccurs: 1

Source	```xml
	<xs:element name="siteAcronym" minOccurs="1" maxOccurs="1">
	  <xs:annotation>
	    <xs:documentation>The siteAcronym element contains a 3-letter acronym specifying the LTER site at which the person holds this role. For network-wide roles not associated with a specific site, use the siteAcronym NWK. This is a required element that cannot be repeated.</xs:documentation>
	  </xs:annotation>
	  <xs:simpleType>
	    <xs:restriction base="xs:string">
	      <xs:length value="3"/>
	    </xs:restriction>
	  </xs:simpleType>
	</xs:element>
	``

Element `personnel` / `person` / `roleList` / `role` / `beginDate`

Annotations	The beginDate element contains the beginning date of the person's participation in the role. This element is optional but highly recommended when known.
Diagram	
Type	xs:date
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	```xml
	<xs:element name="beginDate" type="xs:date" minOccurs="0" maxOccurs="1">
	  <xs:annotation>
	    <xs:documentation>The beginDate element contains the beginning date of the person's participation in the role. This element is optional but highly recommended when known.</xs:documentation>
	  </xs:annotation>
	</xs:element>
	``

Element `personnel` / `person` / `roleList` / `role` / `endDate`

Annotations	The endDate element contains the ending date of the person's participation in the role. This element is optional but highly recommended when known, and should agree with the value of the isActive element value (i.e. endDate in the past when isActive = false, endDate empty or in the future when isActive = true).
Diagram	
Type	xs:date

Properties		
	content:	simple
	minOccurs:	0
	maxOccurs:	1

Source	

	`<xs:element name="endDate" type="xs:date" minOccurs="0" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>`The endDate element contains the ending date of the person's
	participation in the role. This element is optional but highly recommended when known,
	and should agree with the value of the isActive element value (i.e. endDate in the
	past when isActive = false, endDate empty or in the future when isActive = true).`</`
	`xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel / person / roleList / role / isActive`

Annotations	
	The isActive element contains a boolean value indicating whether or not the person is currently active in the role. Possible values are true, false, 1 (i.e. true) or 0 (i.e. false). This element is required, and note that only one combination of roleType and siteAcronym should have isActive of true for the same person. Note that this element takes precedence over endDate for determining status of the role if they disagree.

Diagram	
	isActive Type xs:boolean The isActive element contains a boolean value indicating whether or not the person is currently active in the role.... xs:boolean Built-in primitive type. It defines the boolean values true and false.

Type	
	xs:boolean

Properties		
	content:	simple
	minOccurs:	1
	maxOccurs:	1

Source	

	`<xs:element name="isActive" type="xs:boolean" minOccurs="1" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>`The isActive element contains a boolean value indicating whether or
	not the person is currently active in the role. Possible values are true, false, 1 (i.e.
	true) or 0 (i.e. false). This element is required, and note that only one combination
	of roleType and siteAcronym should have isActive of true for the same person. Note that
	this element takes precedence over endDate for determining status of the role if they
	disagree.`</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel / person / contactInfoList`

Annotations	
	The contactInfoList element contains one or more sets of contact information for the person. This element is optional, but if included cannot be repeated and must include at least one contactInfo element.

Diagram	
	contactInfoList The contactInfoList element contains one or more sets of contact information for the person. This element is optional,... 1..∞ contactInfo The contactInfo element contains one set of contact information for the person, including a descriptive label element...

Properties		
	content:	complex
	minOccurs:	0
	maxOccurs:	1

Model	
	contactInfo+

Children	
	contactInfo

Instance	

	`<contactInfoList>`
	  `<contactInfo>`{1,unbounded}`</contactInfo>`
	`</contactInfoList>`

Source	

	`<xs:element name="contactInfoList" minOccurs="0" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>`The contactInfoList element contains one or more sets of contact
	information for the person. This element is optional, but if included cannot be repeated
	and must include at least one contactInfo element.`</xs:documentation>`
	  `</xs:annotation>`
	  `<xs:complexType>`
	    `<xs:sequence>`

```xml
      <xs:element name="contactInfo" minOccurs="1" maxOccurs="unbounded">
        <xs:annotation>
          <xs:documentation>The contactInfo element contains one set of contact
information for the person, including a descriptive label element and isPrimary boolean
element specifying which set of contact information should be used for official LTER
communication.</xs:documentation>
        </xs:annotation>
        <xs:complexType>
          <xs:sequence>
            <xs:element name="contactInfoID">
              <xs:annotation>
                <xs:documentation>The contactInfoID element contains an unsigned integer
representing the LTER Personnel Database ID of the contact information record. This is
a required element. For new sets of contact information, specify 0 for contactInfoID.</
xs:documentation>
              </xs:annotation>
              <xs:simpleType>
                <xs:restriction base="xs:integer">
                  <xs:minInclusive value="0"/>
                </xs:restriction>
              </xs:simpleType>
            </xs:element>
            <xs:element name="label" type="textField" minOccurs="1" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The label element contains a descriptive text label
describing the set of contact information for the person (e.g. Primary institutional
contact information, Field station address during the summer). This label is intended to
convey information to end-users of the LTER directory regarding which contact information
is appropriate to use under different circumstances. This is a required element.</
xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="isPrimary" type="xs:boolean" minOccurs="1" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The isPrimary element contains a boolean value
specifying whether the contact information represents the primary address of the person
for official LTER communication. Possible values are true, false, 1 (i.e. true) and 0
(i.e. false). This is a required element.</xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="beginDate" type="xs:date" minOccurs="0" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The beginDate element contains the beginning date for
the respective contact information. This element is optional but highly recommended when
known.</xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="endDate" type="xs:date" minOccurs="0" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The endDate element contains the ending date for the
respective contact information. This element is optional but highly recommended when
known, and should agree with the value of the isActive element value (i.e. endDate in
the past when isActive = false, endDate empty or in the future when isActive = true).</
xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="isActive" type="xs:boolean" minOccurs="1" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The isActive element contains a boolean value indicating
whether or not the contact information is currently active. Possible values are true,
false, 1 (i.e. true) and 0 (i.e. false). This is a required element.</xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="address" type="textField" minOccurs="0"
maxOccurs="unbounded">
              <xs:annotation>
                <xs:documentation>The address element contains the delivery address
for the person (e.g. street address). This element is optional and can be repeated for
multiple address lines.</xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="institution" type="textField" minOccurs="0" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The institution element contains the name of the
institution or organization at which the person is located. This element is optional.</
xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="city" type="textField" minOccurs="0" maxOccurs="1">
              <xs:annotation>
                <xs:documentation>The city element contains the name of the city in which
the person resides. This element is optional.</xs:documentation>
              </xs:annotation>
```

```
                </xs:element>
                <xs:element name="administrativeArea" type="textField" minOccurs="0"
maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>The adminstativeArea contains the name of the state,
province or other adminstrative area. This element is optional.</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="postalCode" type="textField" minOccurs="0" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>The postalCode element contains the Zip code or other
postal code for the address. This element is optional.</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="country" type="textField" minOccurs="0" maxOccurs="1">
                  <xs:annotation>
                    <xs:documentation>The country element contains the name of the country in
which the person resides. This element is optional.</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="phone" type="textField" minOccurs="0" maxOccurs="unbounded">
                  <xs:annotation>
                    <xs:documentation>The phone element contains a voice phone or pager number
at which the person can be reached. This is an optional element that can be repeated as
many times as appropriate.</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="fax" type="textField" minOccurs="0" maxOccurs="unbounded">
                  <xs:annotation>
                    <xs:documentation>The fax contains the number of a fax (i.e. facsimile)
machine that can be used to send documents to the person. This is an optional element
that can be repeated as many times as appropriate.</xs:documentation>
                  </xs:annotation>
                </xs:element>
                <xs:element name="email" type="emailAddress" minOccurs="0"
maxOccurs="unbounded">
                  <xs:annotation>
                    <xs:documentation>The email element contains additional electronic mail
addresses that can be used to contact the perosn. This is an optional element that can be
repeated as many times as appropriate.</xs:documentation>
                  </xs:annotation>
                </xs:element>
              </xs:sequence>
            </xs:complexType>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
</xs:element>
```
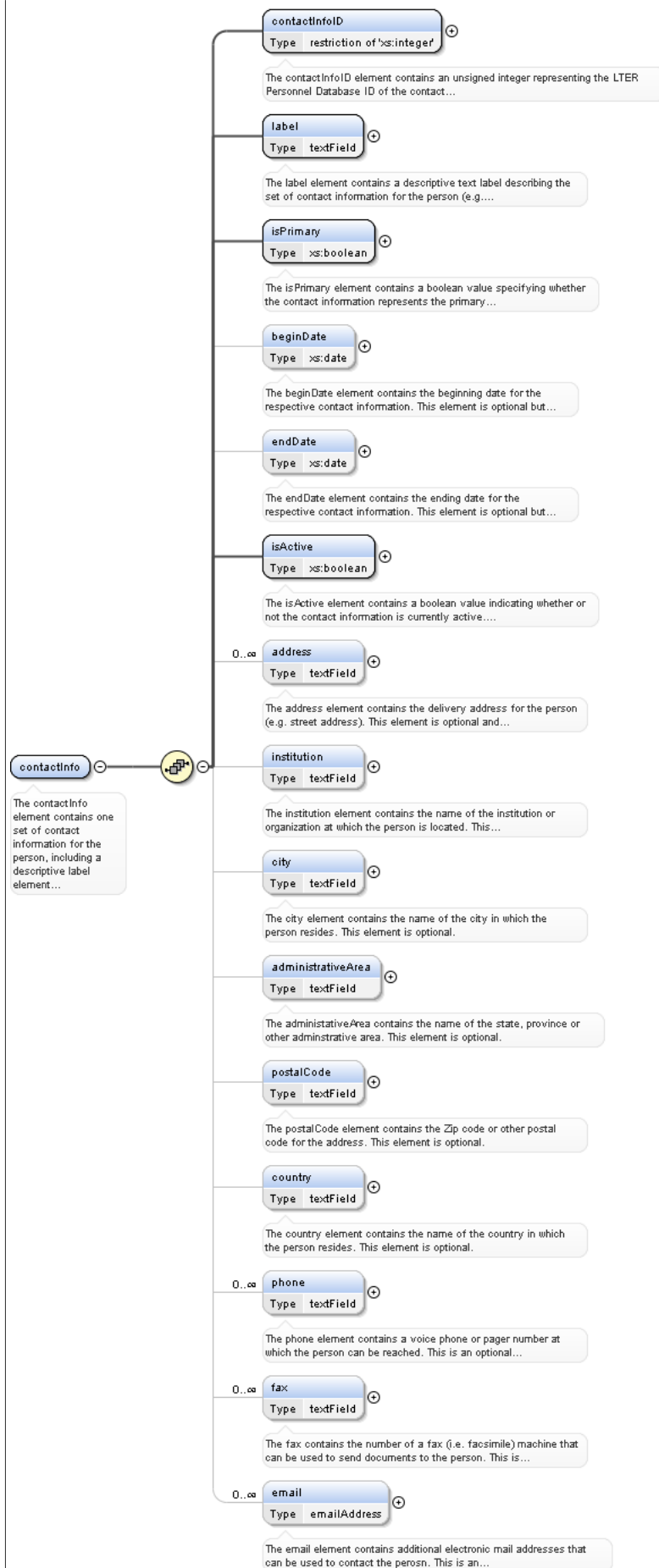
Element `personnel / person / contactInfoList / contactInfo`

Annotations	The contactInfo element contains one set of contact information for the person, including a descriptive label element and isPrimary boolean element specifying which set of contact information should be used for official LTER communication.

Diagram

contactInfo

The contactInfo element contains one set of contact information for the person, including a descriptive label element...

contactInfoID
Type   restriction of 'xs:integer'

The contactInfoID element contains an unsigned integer representing the LTER Personnel Database ID of the contact...

label
Type   textField

The label element contains a descriptive text label describing the set of contact information for the person (e.g....

isPrimary
Type   xs:boolean

The isPrimary element contains a boolean value specifying whether the contact information represents the primary...

beginDate
Type   xs:date

The beginDate element contains the beginning date for the respective contact information. This element is optional but...

endDate
Type   xs:date

The endDate element contains the ending date for the respective contact information. This element is optional but...

isActive
Type   xs:boolean

The isActive element contains a boolean value indicating whether or not the contact information is currently active....

0..∞   address
Type   textField

The address element contains the delivery address for the person (e.g. street address). This element is optional and...

institution
Type   textField

The institution element contains the name of the institution or organization at which the person is located. This...

city
Type   textField

The city element contains the name of the city in which the person resides. This element is optional.

administrativeArea
Type   textField

The administativeArea contains the name of the state, province or other adminstrative area. This element is optional.

postalCode
Type   textField

The postalCode element contains the Zip code or other postal code for the address. This element is optional.

country
Type   textField

The country element contains the name of the country in which the person resides. This element is optional.

0..∞   phone
Type   textField

The phone element contains a voice phone or pager number at which the person can be reached. This is an optional...

0..∞   fax
Type   textField

The fax contains the number of a fax (i.e. facsimile) machine that can be used to send documents to the person. This is...

0..∞   email
Type   emailAddress

The email element contains additional electronic mail addresses that can be used to contact the perosn. This is an...

Properties		
	content:	complex
	minOccurs:	1
	maxOccurs:	unbounded

Model	contactInfoID , label , isPrimary , beginDate{0,1} , endDate{0,1} , isActive , address* , institution{0,1} , city{0,1} , administrativeArea{0,1} , postalCode{0,1} , country{0,1} , phone* , fax* , email*
Children	address, administrativeArea, beginDate, city, contactInfoID, country, email, endDate, fax, institution, isActive, isPrimary, label, phone, postalCode

Instance	```xml
	<contactInfo>
	  <contactInfoID>{1,1}</contactInfoID>
	  <label>{1,1}</label>
	  <isPrimary>{1,1}</isPrimary>
	  <beginDate>{0,1}</beginDate>
	  <endDate>{0,1}</endDate>
	  <isActive>{1,1}</isActive>
	  <address>{0,unbounded}</address>
	  <institution>{0,1}</institution>
	  <city>{0,1}</city>
	  <administrativeArea>{0,1}</administrativeArea>
	  <postalCode>{0,1}</postalCode>
	  <country>{0,1}</country>
	  <phone>{0,unbounded}</phone>
	  <fax>{0,unbounded}</fax>
	  <email>{0,unbounded}</email>
	</contactInfo>
	``

Source	```xml
	<xs:element name="contactInfo" minOccurs="1" maxOccurs="unbounded">
	  <xs:annotation>
	    <xs:documentation>The contactInfo element contains one set of contact information
	 for the person, including a descriptive label element and isPrimary boolean element
	 specifying which set of contact information should be used for official LTER
	 communication.</xs:documentation>
	  </xs:annotation>
	  <xs:complexType>
	    <xs:sequence>
	      <xs:element name="contactInfoID">
	        <xs:annotation>
	          <xs:documentation>The contactInfoID element contains an unsigned integer
	 representing the LTER Personnel Database ID of the contact information record. This is
	 a required element. For new sets of contact information, specify 0 for contactInfoID.</
	xs:documentation>
	        </xs:annotation>
	        <xs:simpleType>
	          <xs:restriction base="xs:integer">
	            <xs:minInclusive value="0"/>
	          </xs:restriction>
	        </xs:simpleType>
	      </xs:element>
	      <xs:element name="label" type="textField" minOccurs="1" maxOccurs="1">
	        <xs:annotation>
	          <xs:documentation>The label element contains a descriptive text label describing
	 the set of contact information for the person (e.g. Primary institutional contact
	 information, Field station address during the summer). This label is intended to convey
	 information to end-users of the LTER directory regarding which contact information
	 is appropriate to use under different circumstances. This is a required element.</
	xs:documentation>
	        </xs:annotation>
	      </xs:element>
	      <xs:element name="isPrimary" type="xs:boolean" minOccurs="1" maxOccurs="1">
	        <xs:annotation>
	          <xs:documentation>The isPrimary element contains a boolean value specifying
	 whether the contact information represents the primary address of the person for official
	 LTER communication. Possible values are true, false, 1 (i.e. true) and 0 (i.e. false).
	 This is a required element.</xs:documentation>
	        </xs:annotation>
	      </xs:element>
	      <xs:element name="beginDate" type="xs:date" minOccurs="0" maxOccurs="1">
	        <xs:annotation>
	          <xs:documentation>The beginDate element contains the beginning date for the
	 respective contact information. This element is optional but highly recommended when
	 known.</xs:documentation>
	        </xs:annotation>
	      </xs:element>
	      <xs:element name="endDate" type="xs:date" minOccurs="0" maxOccurs="1">
	        <xs:annotation>
	          <xs:documentation>The endDate element contains the ending date for the
	 respective contact information. This element is optional but highly recommended when
	 known, and should agree with the value of the isActive element value (i.e. endDate in
	 the past when isActive = false, endDate empty or in the future when isActive = true).</
	xs:documentation>
	``

```
          </xs:annotation>
        </xs:element>
        <xs:element name="isActive" type="xs:boolean" minOccurs="1" maxOccurs="1">
          <xs:annotation>
            <xs:documentation>The isActive element contains a boolean value indicating
whether or not the contact information is currently active. Possible values are true,
false, 1 (i.e. true) and 0 (i.e. false). This is a required element.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="address" type="textField" minOccurs="0" maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>The address element contains the delivery address for the
person (e.g. street address). This element is optional and can be repeated for multiple
address lines.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="institution" type="textField" minOccurs="0" maxOccurs="1">
          <xs:annotation>
            <xs:documentation>The institution element contains the name of the
institution or organization at which the person is located. This element is optional.</
xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="city" type="textField" minOccurs="0" maxOccurs="1">
          <xs:annotation>
            <xs:documentation>The city element contains the name of the city in which the
person resides. This element is optional.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="administrativeArea" type="textField" minOccurs="0" maxOccurs="1">
          <xs:annotation>
            <xs:documentation>The administativeArea contains the name of the state, province
or other adminstrative area. This element is optional.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="postalCode" type="textField" minOccurs="0" maxOccurs="1">
          <xs:annotation>
            <xs:documentation>The postalCode element contains the Zip code or other postal
code for the address. This element is optional.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="country" type="textField" minOccurs="0" maxOccurs="1">
          <xs:annotation>
            <xs:documentation>The country element contains the name of the country in which
the person resides. This element is optional.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="phone" type="textField" minOccurs="0" maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>The phone element contains a voice phone or pager number at
which the person can be reached. This is an optional element that can be repeated as many
times as appropriate.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="fax" type="textField" minOccurs="0" maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>The fax contains the number of a fax (i.e. facsimile) machine
that can be used to send documents to the person. This is an optional element that can be
repeated as many times as appropriate.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="email" type="emailAddress" minOccurs="0" maxOccurs="unbounded">
          <xs:annotation>
            <xs:documentation>The email element contains additional electronic mail
addresses that can be used to contact the perosn. This is an optional element that can be
repeated as many times as appropriate.</xs:documentation>
          </xs:annotation>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
```

Element `personnel / person / contactInfoList / contactInfo / contactInfoID`

Annotations	The contactInfoID element contains an unsigned integer representing the LTER Personnel Database ID of the contact information record. This is a required element. For new sets of contact information, specify 0 for contactInfoID.

Diagram	
	The contactInfoID element contains an unsigned integer representing the LTER Personnel Database ID of the contact...
Type	restriction of xs:integer
Properties	content: simple
| Source | ```xml
<xs:element name="contactInfoID">
  <xs:annotation>
    <xs:documentation>The contactInfoID element contains an unsigned integer representing the LTER Personnel Database ID of the contact information record. This is a required element. For new sets of contact information, specify 0 for contactInfoID.</xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:integer">
      <xs:minInclusive value="0"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
``` |

Element `personnel / person / contactInfoList / contactInfo / label`

Annotations	The label element contains a descriptive text label describing the set of contact information for the person (e.g. Primary institutional contact information, Field station address during the summer). This label is intended to convey information to end-users of the LTER directory regarding which contact information is appropriate to use under different circumstances. This is a required element.
Diagram	The label element contains a descriptive text label describing the set of contact information for the person (e.g.... Custom data type definition for a 0-255 character string text field.
Type	textField
Properties	content: simple
	minOccurs: 1
	maxOccurs: 1
| Source | ```xml
<xs:element name="label" type="textField" minOccurs="1" maxOccurs="1">
  <xs:annotation>
    <xs:documentation>The label element contains a descriptive text label describing the set of contact information for the person (e.g. Primary institutional contact information, Field station address during the summer). This label is intended to convey information to end-users of the LTER directory regarding which contact information is appropriate to use under different circumstances. This is a required element.</xs:documentation>
  </xs:annotation>
</xs:element>
``` |

Element `personnel / person / contactInfoList / contactInfo / isPrimary`

Annotations	The isPrimary element contains a boolean value specifying whether the contact information represents the primary address of the person for official LTER communication. Possible values are true, false, 1 (i.e. true) and 0 (i.e. false). This is a required element.
Diagram	The isPrimary element contains a boolean value specifying whether the contact information represents the primary... Built-in primitive type. It defines the boolean values true and false.
Type	xs:boolean
Properties	content: simple
	minOccurs: 1
	maxOccurs: 1

Source	`<xs:element name="isPrimary" type="xs:boolean" minOccurs="1" maxOccurs="1">`
	  `<xs:annotation>`
	   `<xs:documentation>`The isPrimary element contains a boolean value specifying whether the contact information represents the primary address of the person for official LTER communication. Possible values are true, false, 1 (i.e. true) and 0 (i.e. false). This is a required element.`</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel` / `person` / `contactInfoList` / `contactInfo` / `beginDate`

Annotations	The beginDate element contains the beginning date for the respective contact information. This element is optional but highly recommended when known.
Diagram	
Type	xs:date
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="beginDate" type="xs:date" minOccurs="0" maxOccurs="1">`
	  `<xs:annotation>`
	   `<xs:documentation>`The beginDate element contains the beginning date for the respective contact information. This element is optional but highly recommended when known.`</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel` / `person` / `contactInfoList` / `contactInfo` / `endDate`

Annotations	The endDate element contains the ending date for the respective contact information. This element is optional but highly recommended when known, and should agree with the value of the isActive element value (i.e. endDate in the past when isActive = false, endDate empty or in the future when isActive = true).
Diagram	
Type	xs:date
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="endDate" type="xs:date" minOccurs="0" maxOccurs="1">`
	  `<xs:annotation>`
	   `<xs:documentation>`The endDate element contains the ending date for the respective contact information. This element is optional but highly recommended when known, and should agree with the value of the isActive element value (i.e. endDate in the past when isActive = false, endDate empty or in the future when isActive = true).`</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel` / `person` / `contactInfoList` / `contactInfo` / `isActive`

Annotations	The isActive element contains a boolean value indicating whether or not the contact information is currently active. Possible values are true, false, 1 (i.e. true) and 0 (i.e. false). This is a required element.

Diagram	
Type	xs:boolean
Properties	content: simple
	minOccurs: 1
	maxOccurs: 1

Source	`<xs:element name="isActive" type="xs:boolean" minOccurs="1" maxOccurs="1">`
	`  <xs:annotation>`
	`    <xs:documentation>`The isActive element contains a boolean value indicating whether or not the contact information is currently active. Possible values are true, false, 1 (i.e. true) and 0 (i.e. false). This is a required element.`</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element personnel / person / contactInfoList / contactInfo / address

Annotations	The address element contains the delivery address for the person (e.g. street address). This element is optional and can be repeated for multiple address lines.
Diagram	
Type	textField
Properties	content: simple
	minOccurs: 0
	maxOccurs: unbounded

Source	`<xs:element name="address" type="textField" minOccurs="0" maxOccurs="unbounded">`
	`  <xs:annotation>`
	`    <xs:documentation>`The address element contains the delivery address for the person (e.g. street address). This element is optional and can be repeated for multiple address lines.`</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element personnel / person / contactInfoList / contactInfo / institution

Annotations	The institution element contains the name of the institution or organization at which the person is located. This element is optional.
Diagram	
Type	textField
Properties	content: simple
	minOccurs: 0
	maxOccurs: 1

Source	`<xs:element name="institution" type="textField" minOccurs="0" maxOccurs="1">`
	`  <xs:annotation>`
	`    <xs:documentation>`The institution element contains the name of the institution or organization at which the person is located. This element is optional.`</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `personnel` / `person` / `contactInfoList` / `contactInfo` / `city`

Annotations	The city element contains the name of the city in which the person resides. This element is optional.
Diagram	
Type	textField
Properties	content: simple
	minOccurs: 0
	maxOccurs: 1

Source	`<xs:element name="city" type="textField" minOccurs="0" maxOccurs="1">`
	`  <xs:annotation>`
	`    <xs:documentation>The city element contains the name of the city in which the person resides. This element is optional.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `personnel` / `person` / `contactInfoList` / `contactInfo` / `administrativeArea`

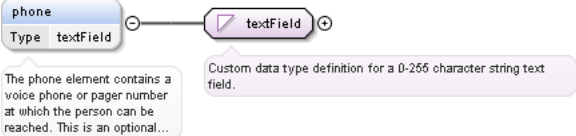| Annotations	The administativeArea contains the name of the state, province or other adminstrative area. This element is optional.
Diagram	
Type	textField
Properties	content: simple
	minOccurs: 0
	maxOccurs: 1

Source	`<xs:element name="administrativeArea" type="textField" minOccurs="0" maxOccurs="1">`
	`  <xs:annotation>`
	`    <xs:documentation>The administativeArea contains the name of the state, province or other adminstrative area. This element is optional.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `personnel` / `person` / `contactInfoList` / `contactInfo` / `postalCode`

Annotations	The postalCode element contains the Zip code or other postal code for the address. This element is optional.
Diagram	
Type	textField
Properties	content: simple
	minOccurs: 0
	maxOccurs: 1

Source	`<xs:element name="postalCode" type="textField" minOccurs="0" maxOccurs="1">`
	`  <xs:annotation>`
	`    <xs:documentation>The postalCode element contains the Zip code or other postal code for the address. This element is optional.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element `personnel / person / contactInfoList / contactInfo / country`

Annotations	The country element contains the name of the country in which the person resides. This element is optional.
Diagram	
Type	textField
Properties	content: simple minOccurs: 0 maxOccurs: 1

Source	`<xs:element name="country" type="textField" minOccurs="0" maxOccurs="1">`
	  `<xs:annotation>`
	    `<xs:documentation>`The country element contains the name of the country in which the person resides. This element is optional.`</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel / person / contactInfoList / contactInfo / phone`

Annotations	The phone element contains a voice phone or pager number at which the person can be reached. This is an optional element that can be repeated as many times as appropriate.
Diagram	
Type	textField
Properties	content: simple minOccurs: 0 maxOccurs: unbounded

Source	`<xs:element name="phone" type="textField" minOccurs="0" maxOccurs="unbounded">`
	  `<xs:annotation>`
	    `<xs:documentation>`The phone element contains a voice phone or pager number at which the person can be reached. This is an optional element that can be repeated as many times as appropriate.`</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `personnel / person / contactInfoList / contactInfo / fax`

Annotations	The fax contains the number of a fax (i.e. facsimile) machine that can be used to send documents to the person. This is an optional element that can be repeated as many times as appropriate.
Diagram	
Type	textField
Properties	content: simple minOccurs: 0 maxOccurs: unbounded

Source	`<xs:element name="fax" type="textField" minOccurs="0" maxOccurs="unbounded">`
	  `<xs:annotation>`
	    `<xs:documentation>`The fax contains the number of a fax (i.e. facsimile) machine that can be used to send documents to the person. This is an optional element that can be repeated as many times as appropriate.`</xs:documentation>`
	  `</xs:annotation>`

```
                                        </xs:element>
```

Element `personnel / person / contactInfoList / contactInfo / email`

Annotations	The email element contains additional electronic mail addresses that can be used to contact the perosn. This is an optional element that can be repeated as many times as appropriate.
Diagram	
Type	emailAddress
Properties	content: simple
	minOccurs: 0
	maxOccurs: unbounded

Source	`<xs:element name="email" type="emailAddress" minOccurs="0" maxOccurs="unbounded">`
	`  <xs:annotation>`
	`    <xs:documentation>`The email element contains additional electronic mail addresses that can be used to contact the perosn. This is an optional element that can be repeated as many times as appropriate.`</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Simple Type(s)

Simple Type `textField`

Annotations	Custom data type definition for a 0-255 character string text field.	
Diagram		
Type	restriction of xs:string	
Used by	Elements	personnel/person/contactInfoList/contactInfo/address, personnel/person/contactInfoList/contactInfo/administrativeArea, personnel/person/contactInfoList/contactInfo/city, personnel/person/contactInfoList/contactInfo/country, personnel/person/contactInfoList/contactInfo/fax, personnel/person/contactInfoList/contactInfo/institution, personnel/person/contactInfoList/contactInfo/label, personnel/person/contactInfoList/contactInfo/phone, personnel/person/contactInfoList/contactInfo/postalCode, personnel/person/identity/firstName, personnel/person/identity/lastName, personnel/person/identity/middleName, personnel/person/identity/nameAlias, personnel/person/identity/preferredName, personnel/person/identity/prefix, personnel/person/identity/suffix, personnel/person/identity/title, personnel/person/roleList/role/roleType

Source	`<xs:simpleType name="textField">`
	`  <xs:annotation>`
	`    <xs:documentation>`Custom data type definition for a 0-255 character string text field.`</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:restriction base="xs:string">`
	`    <xs:minLength value="0"/>`
	`    <xs:maxLength value="255"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`	

Simple Type `emailAddress`

Annotations	Custom data type definition for an email address.	
Diagram		
Type	restriction of xs:string	
Used by	Elements	personnel/person/contactInfoList/contactInfo/email, personnel/person/identity/primaryEmail

Source	```xml
	<xs:simpleType name="emailAddress">
	  <xs:annotation>
	    <xs:documentation>Custom data type definition for an email address.</xs:documentation>
	  </xs:annotation>
	  <xs:restriction base="xs:string">
	    <xs:pattern value="[^@]+@[^\.]+\..+"/>
	  </xs:restriction>
	</xs:simpleType>
	``

Attribute(s)

Attribute `personnel / person / roleList / role / roleType / @type`

Annotations	The type attribute specifies the type or scope of the roleType. Allowed values are "nsf" for pre-defined NSF roles and "local" for site-defined and network-wide roles in the Personnel Database.
Type	restriction of xs:string
Properties	use: required
Used by	Element personnel/person/roleList/role/roleType

Source	```xml
	<xs:attribute name="type" use="required">
	  <xs:annotation>
	    <xs:documentation>The type attribute specifies the type or scope of the roleType.
	Allowed values are "nsf" for pre-defined NSF roles and "local" for site-defined and
	network-wide roles in the Personnel Database.</xs:documentation>
	  </xs:annotation>
	  <xs:simpleType>
	    <xs:restriction base="xs:string">
	      <xs:enumeration value="nsf"/>
	      <xs:enumeration value="local"/>
	    </xs:restriction>
	  </xs:simpleType>
	</xs:attribute>
	``

Attribute `personnel / person / @changeDate`

Annotations	The changeDate attribute lists the date any content in the personnel record was last modified. This is a read-only attribute that will be ignored when submitting or updating personnel information in the database.
Type	xs:date
Properties	content: simple
Used by	Element personnel/person

Source	```xml
	<xs:attribute name="changeDate" type="xs:date">
	  <xs:annotation>
	    <xs:documentation>The changeDate attribute lists the date any content in the personnel
	record was last modified. This is a read-only attribute that will be ignored when
	submitting or updating personnel information in the database.</xs:documentation>
	  </xs:annotation>
	</xs:attribute>
	``