

XML Form of the DeadEnds Model

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The DeadEnds genealogical data model is the model used by the DeadEnds genealogical applications. This note describes that model using XML as an external format.

The overall format of a collection of DeadEnds objects in XML form is:

xmlRepresentation :

```
<deadends>
    record*
</deadends>
```

The elements directly below the <deadends> element are called *records* because they are both the major data objects of the model, and they are treated as records in DeadEnds databases.

In the notation below * means zero-or more occurrences, ? means zero or one occurrence, and | or **or** mean alternatives. Text in normal font is literal and symbols in italic font are replaced by text based on the symbols' definitions. The rules are written with an implied order among the subelements. The XML files created by DeadEnds applications use this order; however, during import of external files the order of subelements is unimportant.

There are a number of different types of records, each specified in its own section:

record : (*personRecord* | *eventRecord* | *sourceRecord* | *placeRecord* | ...)

Person Records

Person records hold information about the persons being researched. Person records can hold information tied directly to evidence, or they can hold information that summarizes information discovered about a person from many sources.

personRecord :

```
<person id="personUUID">
    sex
    personNameStructure*
    personAttribute*
    vitalStructure*
    eventRoleReference*
    relationReference*
    url*
    personReference*
    note*
    source*
</person>
```

sex :

```
<sex> (M | F | U) </sex> or  
<sex value="(M | F | U)"/>
```

personNameStructure:

```
<name> XML name elements TBD </name>
```

personAttribute : attribute

vitalStructure :

```
<vital type="vitalType">  
    dateStructure*  
    place*  
    vitalAttribute*  
    url*  
    note*  
    source*  
</vital>
```

Vital structures hold information about a person's vital events. Vital events are those with the person as the primary role player. Vital events are used when there is evidence for the vital event, but the evidence does not include information about any other persons. A vital structure should contain or refer to a source that specifies where the evidence for the vital can be found. A vital structure represents the same information recorded in the event substructures (e.g., BIRT, DEAT) of GEDCOM.

eventRoleReference :

```
<role id="eventUUID" type="eventRoleType" /> or  
<role id="eventUUID" type="eventRoleType">  
    eventRoleReferenceAttribute*  
    note*  
    source*  
</role>
```

Event role references are found in Person records and they refer to Event records that the person played a role in. They are used when the evidence includes information about an event with multiple role players, and the user records an Event record and a Person record for each role player in the event. Each of the Person records refers to the Event record with an event role reference, and each Event record refers to the Person records with person role references.

eventRoleReferenceAttribute : attribute

relationReference :

```
<relation id="personUUID" type="relationType" /> or  
<relation id="personUUID" type="relationType">  
    relationReferenceAttribute*  
    note*  
    source*  
</relation>
```

Relation references are found in Person records and they refer to Person records that a person is related to. These references are used when there is evidence for the relationship, but no evidence for an event that established the relationship. A vital reference represents the same information recorded in the ASSO substructure of GEDCOM.

relationReferenceAttribute : attribute

personReference :

```
<person id=" personUUID" /> or
<person id=" personUUID">
    personReferenceAttribute*
    note*
    source*
</person>
```

Person references are found in Person records. A person reference refers to another Person record that the user believes refers to the same real individual that Person record with the reference Person refers to. The Person records referred to generally provide the evidence and proof about the Person record referring to them. The Person records referred to are sometimes called evidence persons and the Person records doing the referring are sometimes called conclusion persons. These terms are relative as it is possible to construct multi-level trees of Person records.

personReferenceAttribute : attribute

url : (urlStructure | urlReference)

URLs provide the names of external resources, generally files or web pages, that have information about the entity containing the URL.

urlStructure :

```
<url type="urlType">
    <name> STRING </name>
    note*
    source*
</url>
```

A URL structure is an element within an record gives the name of an external resource.

urlReference :

```
<url id="urlUUID" type="urlType" /> or
<url id=" urlUUID" type="urlType">
    urlReferenceAttribute*
    note*
    source*
</url>
```

URL references refer to URL records.

urlReferenceAttribute : attribute

note : (*noteStructure* | *noteReference*)

Notes provide any additional information a user may choose to add to a record. Notes can be substructures within records, or they can be separate Note records so that multiple records may refer to them.

noteStructure :

```
<note> STRING </note>
```

noteReference :

```
<note id="noteUUID" /> or  
<note id=" noteUUID">  
    noteReferenceAttribute*  
    note*  
    source*  
</note>
```

noteReferenceAttribute : *attribute*

source : (*sourceStructure* | *sourceReference*)

Sources provide the information needed to justify other records. Sources can be substructures within records, or they can be separate Source records so many records may refer to them.

sourceStructure :

```
<source> XML source elements TBD </source>
```

sourceReference :

```
<source id="sourceUUID" /> or  
<source id=" sourceUUID">  
    sourceReferenceAttribute*  
    note*  
    source*  
</source>
```

sourceReferenceAttribute : *attribute*

place : (*placeStructure* | *placeReference*)

Places provide information about where events occurred. Places can be substructures within records, or they can be separate Place records so that other records may refer to them.

placeStructure :

```
<place type="placeType">  
    <name> STRING </name>  
    (<abbreviation> STRING </abbreviation>)?  
    placeAttribute*  
    place?  
    urlReference*  
    note*
```

```
        source*
    </place>
```

```
placeReference :
    <place id="placeUUID" /> or
    <place id=" placeUUID">
        placeReferenceAttribute*
        note*
        source*
    </place>
```

placeReferenceAttribute : attribute

Event Records

Event records provide information about events that have occurred in persons' lives.

```
eventRecord :
    <event id="eventUUID" type="eventType">
        dateStructure*
        place*
        eventAttribute*
        personRoleReference*
        eventReference*
        url*
        note*
        source*
    </event>
```

eventAttribute : attribute

```
personRoleReference :
    <role id="personUUID" type="personRoleType" /> or
    <role id=" personUUID" type="personRoleType">
        personRoleReferenceAttribute*
        note*
        source*
    </role>
```

Person role references refer to the Person records of the persons who were role players in the event.

personRoleReferenceAttribute : attribute

```
eventReference :
    <event id="eventUUID" /> or
    <event id=" eventUUID">
        eventReferenceAttribute*
```

```
        note*
        source*
    </event>
```

Event references refer to other Event references that the user believes refer to the same event as this Event record.

eventReferenceAttribute : attribute

Source Records

Source records represent sources of genealogical information in the real world. Sources records may refer to more encompassing sources allowing a tree of sources.

sourceRecord :

```
    <source id="sourceUUID" type="sourceType">
        sourceAttribute*
        url*
        note*
        source*
    </source>
```

sourceAttribute : attribute

Place Records

placeRecord :

```
    <place id="placeUUID" type="placeType">
        <name> STRING </name>
        (<abbreviation> STRING </abbreviation>)?
        placeAttribute*
        place?
        url*
        note*
        source*
    </place>
```

placeAttribute : attribute

Note Records

noteRecord :

```
    <note id="noteUUID"> XML note elements TBD </note>
```

Group Records

```
groupRecord :  
  <group id="groupUUID" type="groupType">  
    dateStructure*  
    place*  
    personRoleReference*  
    groupAttribute*  
    url*  
    note*  
    source*  
  </group>
```

groupAttribute : attribute

Entity Records

```
entityRecord :  
  <entity id="entityUUID" type="entityType">  
    dateStructure*  
    place*  
    entityAttribute*  
    url*  
    note*  
    source*  
  </entity>
```

entityAttribute: attribute

URL Records

```
urlRecord :  
  <url id="urlUUID" type="urlType">  
    <name> STRING </name>  
    urlAttribute*  
    note*  
    source*  
  </url>
```

urlAttribute : attribute

Attributes

Attributes assign properties, characteristics, attributes, and traits to entities or higher level attributes.

attribute :

<IDEN/> or

<IDEN> *STRING?* *attribute </IDEN> or**

<IDEN value="STRING"/> or

<IDEN value="STRING"> *attribute </IDEN> or**

<attribute key="IDEN"/> or

<attribute key="IDEN"> *STRING?* *attribute </attribute> or**

<attribute key="IDEN" value="STRING"/> or

<attribute key="IDEN" value="STRING"> *attribute </attribute>**

In the record descriptions above there are many rules of the form:

specificAttribute : attribute

These rules indicate that there are specific subsets of attribute keys that are appropriate the specific contexts where attributes can appear. The full DeadEnds specification provides the lists of tags for the contexts.

Date Structures

dateStructure:

<date> *TBD*

</date>

Name Structures

nameStructure:

<name> *TBD*

</name>