J. Sharp OCIO January 2007

Person Name v1.0

Status of this Memo

This document specifies a standard for the National Institutes of Health (NIH) and requests discussion and suggestions for improvements. Distribution of this memo is unlimited.

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1 Introduction

This standard defines the use of Person Name at NIH. Person Name Types are presented. Some are modifiable by the person and others are derived from other name types. This standard lists all of the derived name types and the associated derivation rules. It is assumed that a history of the names a person has used will be kept so all person names have a 'valid from' and a 'valid to' date. Some name types only allow a single instance to have a 'valid to' date in the future (or a null 'valid to' date), in these cases that instance is used for all current name functions.

There are many ways that person names can be stored in applications. This standard does not prescribe storage structure, but the names and name types defined here should directly convert into fact types and be stored appropriately for the application.

1.1 Person Name Entity Background

Person Name is one of the most common values used at NIH. This standard provides a set of rules so that information about the name of a person can be informally captured and used across applications.

1.2 Intended Audience

This standard is available to the entire NIH community, but it is most relevant to the following NIH stakeholders:

- *Data Architects* Provide standards for the defining of the person entities that are used across NIH.
- Database Designers Responsible for complying with the standard person entities as applications are designed, implemented and maintained.
- IT Program Managers Any manager of projects requiring person information.
- Business Owners of Person Data The person data entities described in this standard are the commonly used NIH managers to maintain person information.

1.3 Scope of Standard

This standard is intended to provide a precise definition of the person data entities required to support the NIH mission across the entire enterprise. Therefore, this standard is applicable to all uses of person information at NIH.

This scope of this standard is limited to defining of person entities. The entities are presented as in rules and relationships. The types of names are presented with their associated derivation rules.

2 Person Name Entity Types

A diagram of the person name entities, attributes and relationships is presented in Object Role Modeling (ORM)¹ notation in Figure 1. This model is non-normative and is one of a number of valid models that express the associated rules. Appendix A presents and ER and XML model of the same rules. This standard complies with the Federal Enterprise Architecture (FEA) Data Reference Model (DRM)².

A particular instance of a Name Type may have a maximum number of current person name instances (Person Names that have not gone passed their effective end date.) When an instance of a Person is created a Legal Name is mandatory. A Common Name may also be given, but if one is not then the Legal Name is returned when the Common Name is requested. A derivation Rule for each Name Type is also given in Tables 1 and 2.

The system account, displayable (excluding organization and organizational status) and the primary email names for a person must be unique. The rules for possibly adding digits to these names to make them unique are given in the Table 1.

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For more information on the ORM notation and interpreting ORM models see http://www.orm.net/.

² The DRM version 2.0 can be found at http://www.whitehouse.gov/OMB/egov/documents/DRM_2_0_Final.pdf.

Figure 1 – Person Name Graphical Model

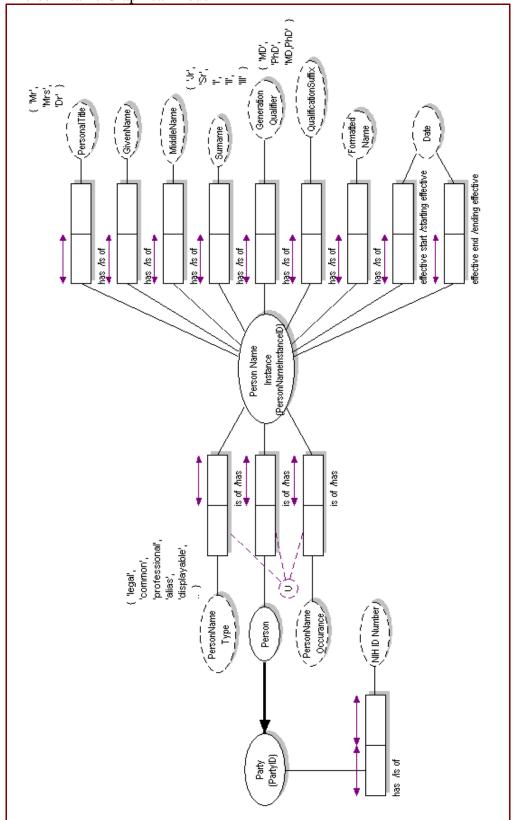


Table 1: Person Name Type Rules

Person	Definition	Use	Synonym	Formula	Length	Rules	Examples
Name Type							
Legal	Legal name of a person	For official correspondence that requires the identification of a person.		Name concatenated from allowed populations: Given Name + " " + Middle Name + " " + Surname + " " + Generation Qualifier	256 maximum characters, single spaces only, letters " ' " and " - " allowed.	The Legal Given Name and/or Middle Name may be an Initial	James L Smith, Mary Sue Jones, Jim K Smith III
Common	A person's preferred name	For regular communication with a person in the work environment. The legal name is returned if no common name exists.		Name concatenated from allowed populations: Given Name + " " + Middle Name + " " + Surname + " " + Generation Qualifier	256 maximum characters, single spaces only, letters " ' " and " - " allowed.	The common surname is equal to the legal surname.	Jim Smith, Mary Jones, J K Smith III
Professional	The professional name of a person	For professional correspondence where titles and degrees are desired.		Name concatenated from allowed populations: Personal Title + " " + Given Name + " " + Middle Name + " " + Surname + " " + Generation Qualifier + " " + Suffix Qualifier	256 maximum characters, single spaces only, letters " ' " and " - " allowed.		Dr James L Smith MD, Dr Mary S Allen PhD, Jim Smith III RN
Alias	Other name for a person	Name that may be required for security investigations.	Maiden, Birth Name	Name concatenated from allowed populations: Given Name + " " + Middle Name + " " + Surname + " " + Generation Qualifier	256 maximum characters, single spaces only, letters " ' " and " - " allowed.		Mary Allen
Badge	The name appearing on an NIH badge	NIH badge.		Legal Name Required. Given Name + " " + Middle Initial + " " + Surname except when Given Name is an Initial, then Given Name + " " + Middle Name + " " + Surname	256 maximum characters, single spaces only, letters " ' " and " - " allowed.		James L Smith, Mary S Jones, Jim K Smith III, J Robert Jones

Person	Definition	Use	Synonym	Formula	Length	Rules	Examples
Name Type							
System Account	The primary name used to allow access to network resources and services. Unique name (Uniname) that represents a person who uses network resources and services.	Primary network account access.	sAMAccount Name; Uniname	Use the Legal Name. Surname + first initial of (and one or more letters, as needed) Given Name + (optional, if needed) first initial (and one or more letters, as needed) of Middle Name + unique digits (if needed for NIH-wide uniqueness, not only within IC). Option: Order can be reversed to eliminate requirement of unique digit: first initial of (and one or more letters, as needed) Given Name + (optional, if needed) first initial (and one or more letters, as needed) of Middle Name + Surname	20 maximum characters. Truncate surname if necessary. Capitalize first letter in each name attribute used, uninames are converted into lowercase.	The name is not case sensitive. The name can only be changed when there is a legal name change. The name must be unique on the uiname list. Usually full middle names make the name too long for practical use.	SmithJ, JSmith, SmithJK, JKSmith, SmithJ2

Person Name	Definition	Use	Synonym	Formula	Length	Rules	Examples
Type							
Displayable	The name displayed in network service activities such as email headers. It should be a quickly recognizable name (usually based on the common name) of a person. The displayable name includes a unique name string plus department and organization status.	The name displayed on email correspondence.		Option: use the Legal, Common or Professional Name. Default is the Common Name. For Legal or Common Name: Surname + ", " + Given Name + " " + (optional) Middle Initial or Name + " " + Generation Qualifier + Displayable Unique Digit. If display name is a duplicate, use digits, beginning with 2, place after name. For Professional Name: Personal Title + " " + Surname + ", " + Given Name + " " + (optional) Middle Initial or Name + " " + Generation Qualifier + " " + Suffix Qualifier + " " + Displayable Unique Digit. If display name is a duplicate, use digits, beginning with 2, place after name. Optional changes to the Displayable Name may be tried (Middle Name instead of Middle Initial) or different Name Type in order to make the name portion of the displayable name unique without the addition of a unique digit. To complete the displayable name use the name portion of the displayable name + " (" + Company + "/" + Department (+"/" + Department may be repeated down desired level) +") [" single digit abbreviation of Organization Type + "]"	256 maximum characters, single spaces only.	The name portion of the displayable name must be unique over all other name portions of displayable names. This name can only be changed if the Legal or Professional (if Professional Name was used) Name is changed. The extension to the name portion is: Company = NIH Department is the NIH Organization Path to the desired level. Organization Type is abbreviated and placed as a single character between brackets []: [E] Employee, all NIH Full Time Equivalent (FTE) [F] Fellow [C] Contractor [G] Guest [V] Volunteer [T] Tenant	Name portion: Dr James L Smith MD, Mary Jones 3, Jim Smith 3, J Robert Jones Displayable name: Dr James L Smith MD (NIH/CI) [E], Smith, Jim 3 (NIH/CIT) [C], Smith, James (NIH/OD) [E], Smith, James K (NIH/CI) [C]
Primary Email	The email address created from the System Account Name	Primary email name.	exchange alias, sAMAccount Name; Uniname			Identical to the System Account Name	smithj, jsmith, smithjk, jksmith, smithj2

Person Name Type	Definition	Use	Synonym	Formula	Length	Rules	Examples
Other Email	Alternate email address or a person	Other email name.	mailNickNam e; unique Uniname; unique sAMAccount Name	Selected by person with the account		Must be unique in Uniname list.	smithjh, jsmith2
Full Primary Email	The complete email address string for the primary email name	Complete primary email address.	userPrinciple Name	Primary Email Name + "@" + appropriate domain		The name must be compliant with RFC 822 ³	smithj@mail .nih.gov, jsmith@mail .nih.gov

³ RFC 822 - STANDARD FOR THE FORMAT OF ARPA INTERNET TEXT MESSAGES http://www.faqs.org/rfcs/rfc822.html

Table 2: Person Name Type Rules continued

Name Type	Max Current #	Mandatory
Legal	1	Υ
Common	1	N
Professional	1	N
Alias	∞	N
Badge	1	N
System Account	1	N
Displayable	1	N
Primary Email	1	N
Other Email	8	N
Full Primary Email	1	N

The 'Person Name' standards listed in Section 6 describe different structures and presentations for various regions of the world. The 'Western' presentation of the person name will be used. This presentation is 'FirstName MiddleName/Initial LastName.' In addition, some regions allow a partitioned name. All name parts will be managed as single strings.

This standard recognizes that the Person Name for a Person can change over time. The name history is important for finding a person when the name has changed and the management of the calculated unique names.

Only some of the defined Person Name rules may be needed for a particular application. Compliance with the rules for the Person Name Types used is sufficient. A particular application may want to denormalize the tables presented here for implementation purposes.

3 Person Name Data Entities

Table 3 shows the person name data entities. These entities define how person names are to be collected and managed. For each of the entities, the following information is provided:

- *Entity Name*: The name used to refer to the entity.
- Definition: A description of the entity in plain language consistent with common usage within NIH whenever possible.
- Subject Area: Topics of interest shared within a community that is used to group entities and align them with business processes.
- *Super Type*: An entity is a specialized form of its super-type and may introduce additional attributes. For example, an organization internal to NIH is a specialized type of organization that may include additional information such as a NIH mail stop or detailed information about membership.
- *Source*: The source of the definition provided.

Table 3 – Person Name Entities

#	Entity Name	Definition	Subject Area	Super Type	Source
1	Party	A type of entity that is able to act or perform a	Party		
		specific role(s) within the context of a process. Can			
		be either a person, organization, or intelligent agent			
2	Person	Any individual of interest to the NIH for which the	Party	Party	
		NIH maintains information.			
3	Person Name	One of a number of person names that refer to a	Party		
	Instance	person.			

Table 3 shows the person name data attributes. Attributes are the placeholders that specify data instances that can be populated in tables. One or more of attributes can be used to identify entities. These attributes define the data instances that either identify person entities or specify information about a person name:

- Attribute Name: The name used to refer to the attribute.
- Definition: A description of the attribute in plain language consistent with common usage within NIH whenever possible.
- *Synonym*: Alternate names that refer to the attribute.
- Length: Description of the data storage rules.
- Source: The source of the definition provided.
- *Examples*: An illustrative example of the attribute being described.

Table 4 – Person Name Attributes

#	Attribute Name	Definition	Synonym	Length	Source	Examples
1	NIH ID Number	unique identifier for person (see NRFC 0005 ⁴)				0011264221, 0014124991
2	Party ID	Unique identifier for the party entity.		TBD		TBD
2	Person Name Instance ID	Unique identifier for a person name instance.		value		1, 13456
3	Person Name Type	The types of names that are used to refer to a person at NIH.		256 maximum characters – see rules for individual name types.		Legal, Common, Professional, Alias, Badge, System Account, Displayable, Primary Email, Other Email, Full Primary Email
4	Person Name Occurrence	Sequential increasing number for each new instance of a name type.		value		1, 5
5	Personal Title	A person's desired title.	Title, Form of Address	16 maximum characters		Mr, Mrs, Ms, Dr
6	Given Name	Given name of a person	First Name	64 maximum characters; letters " ' " and " - " allowed.		2006, 2007

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 $^{^4}$ NRFC 0005: Unique Identifier for People, the NIH ID Number

#	Attribute Name	Definition	Synonym	Length	Source	Examples
7	Middle Name	Middle name or initial of a		64 maximum		1, 2, 3. 4
		person.		characters;		
				letters " ' " and		
				" - " allowed.		
8	Surname	Last name of a person.	Last Name	64 maximum		01, 03, 05, 19
				characters;		
				letters " ' " and		
				" - " allowed.		
9	Generation	Denotes a generation of the	Generation	5 maximum		Jr, Sr, II, III
	Qualifier	person.	Identifier	characters		
10	Qualification	The earned qualification of a		20 maximum		PhD, MD,
	Suffix	person.		characters		'MD, PhD'
11	Formatted Name	Complete name string derived via		256 maximum		John W.
		the rules for each name type.		characters with		Smith,
				some name types		jsmith3
				allowing fewer		
				characters.		
12	Effective Start	The date the name instance is to		date		1/15/2006
	Date	be used.				
13	Effective End	The date the name instance is to		date		4/23/2004
	Date	no longer be used.				

All of the attributes are not available for the defined name types. Some name types do not include values while other name types are totally or partially derived from other name types. These restriction are shown in Table 5.

Table 5 – Population Restrictions for Name Types

		Allowed Population							
Name Type	Personal Title	Given Name	Middle Name	Surname	Generation Qualifier	Qualification Suffix	Formatted Name	Effective Starting Date	Effective Ending Date
Legal	-	Υ	Υ	Υ	Υ	-	Υ	Ϋ́	Y
Common	-	Υ	Υ	Y	Y	-	Y	Υ	Y
Professional	Y	Υ	Y	Y	Y	Y	Y	Y	Y
Alias	-	Υ	Υ	Y	Y	-	Y	Y	Y
Badge	-	-	ı	-	-	-	Υ	Υ	Y
System Account	-	-	-	-	-	-	Υ	Υ	Y
Displayable	-	-	ı	-	-	ı	Υ	Y	Υ
Primary Email	-	-	-	-	-	-	Y	Y	Υ
Other Email	-	-	-	-	-	ı	Υ	Υ	Y
Full Primary Email	-	-	-	-	-	-	Υ	Y	Y

4 Person Name Data Relationships and Rules

In addition to the defined person name entities and attributes, there are relationships that can be expressed as statements of business rules are shown in Table . Each relationship is expressed as a rule and then an instanced of the relationship is given as an example.

Table 6 – Person Name Relationships

#	Relationship/Rule	Example
1	Person name instance is identified by Person Name	Person name instance is identified by
	Instance ID>.	000021.
2	Person name instance is identified by person name	Person name instance is identified by person
	type of <person name="" type=""></person> with person name	name type of Professional with person
	occurrence of <person name="" occurrence=""></person> for	name occurrence of 2 for person with 001 -
	person with <nih id="" number=""></nih> .	9999-2222.
3	Person name instance with Person Name Instance	Person name instance with 000021 has a
	ID> has a personal title of <personal title=""></personal> .	personal title of Dr .
4	Person name instance with Person Name Instance	Person name instance with 000021 has a
	ID > has a given name of <given name=""></given> .	given name of James .
5	Person name instance with Person Name Instance	Person name instance with 000021 has a
	ID > has a middle name of <middle name=""></middle> .	middle name of K .
6	Person name instance with Person Name Instance	Person name instance with 000021 has a
	ID > has a surname of <surname></surname> .	surname of Smith .
7	Person name instance with Person Name Instance	Person name instance with 000021 has a
	ID> has a generation qualifier of <generation< b=""></generation<>	generation qualifier of III .
	Qualifier>.	
8	Person name instance with Person Name Instance	Person name instance with 000021 has a
	ID> has a qualification suffix of <qualification< b=""></qualification<>	qualification suffix of MD , PhD .
	Suffix>.	
9	Person name instance with Person Name Instance	Person name instance with 000021 has a
	ID > has a formatted name of <formatted name=""></formatted> .	qualification suffix of MD, PhD.
10	Person name instance with Person Name Instance	Person name instance with 000021 has an
	ID > has an effective start date of <effective b="" start<=""></effective>	effective start date of 1/21/2003.
	Date>.	
11	Person name instance with <person b="" instance<="" name=""></person>	Person name instance with 000021 an
	ID > has an effective end date of <effective b="" end<=""></effective>	effective end date of 6/12/2006.
	Date>.	
12	Person with is identified by party id Party ID .	Person with is identified by party id TBD #.
13	Person with party id Party ID is a type of party	Person with party id TBD # is a type of
	with party id Party ID .	party with party id TBD #.
14	Person with party id Party ID has NIH id number	Person with party id TBD # has NIH id
	<nih id="" number="">.</nih>	number 001-9999-2222 .

5 Related Standards and Practices

There is current work by two international consortiums that cover the rules for creating a person name. The work is similar but different attribute names are regularly called out for the same attribute. This requires managing synonyms.

5.1 HR-XML CONSORTIUM: Person Name

The HR-XML Consortium is an independent non-profit organization dedicated to the development and promotion of a standard suit of human resource XML specifications. The Person Name attributes for this standard are either used or called out as synonyms.

5.2 OASIS: Extensible Name Language (xNL) Standard

OASIS is a not for profit, global consortium that drives the development, convergence and adoption of e-business standards. The Person Name attributes for this standard are either used or called out as synonyms. This standard specifies a party object with person and organization being subtypes.

5.3 NRFC 0005 - Unique Identifier for People, the NIH ID Number

The NIH ID Number called out in this model is the unique identifier for people.

6 References

- [1] HR XML: Person Name, http://ns.hr-xml.org/2_4/HR-XML-2_4/CPO/PersonName.html
- [2] OASIS Extensible Name Language (xNL) Standard Description Document for W3C DTD/Schema Version 2.0
- [3] NRFC 0005- Unique Identifier for People, the NIH ID Number
- [4] The DRM version 2.0 http://www.whitehouse.gov/OMB/egov/documents/DRM_2_0_Final.pdf
- [5] RFC 822 STANDARD FOR THE FORMAT OF ARPA INTERNET TEXT MESSAGES http://www.faqs.org/rfcs/rfc822.html

7 Contact

To contact the NRFC Editor, send an email message to EnterpriseArchitecture@mail.nih.gov.

8 Security Considerations

This NRFC raises no security issues. The Person Name models describe the general way to manage the naming of people at NIH. Individual objects such as social security number and some name types may be considered private and need to be managed appropriately.

9 Changes

Version	Date	Change	Authority	Author of
				Change
0.1	4/6/2006	Original Draft	NIHRFC0001/BCP0001	John Sharp
0.2	4/17/2006	Editorial Changes	NRFC0001	Steve Thornton,
				NRFC Editor

Version	Date	Change	Authority	Author of
				Change
0.3	9/28/2006	- The OASIS standard was selected as the primary source document - The formatted names are presented in 'Western' style - The name parts are available for other styles - The graphical model has been updated to reflect requested changes - Constraints have been expanded to precisely define the name types - The entities and relationship rules have been presented in a table - Additional standards have been referenced - ER and XML models have been included in the Appendix - Table of Contents	NIHRFC0001/BCP0001	John Sharp
0.4	10/16/2006	has been updated Corrected dates and tracking numbers.	NRFC0001	Steve Thornton
0.5	1/22/2007	Referenced RFC 822 within the text	NIHRFC0001/BCP0001	John Sharp
1.0	1/24/2007	-Approved by ARB	ARB	Steve Thornton

10 Author's Address

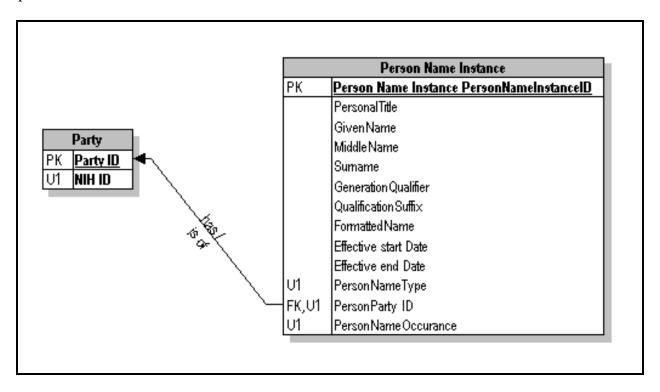
John Sharp Contractor National Institutes of Health 10401 Fernwood Road MSC 4806 Bethesda, Maryland 20817 Phone: 505-243-1498

Cell: 505-710-1370

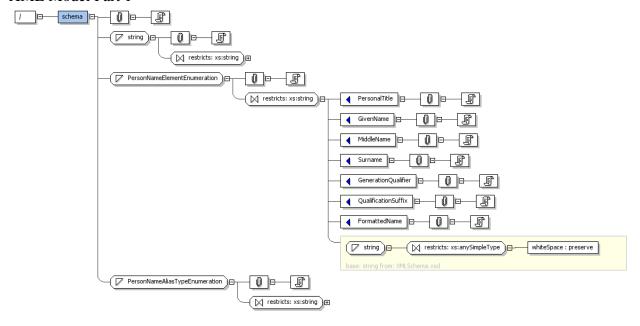
Email: jsharp@mail.nih.gov

Appendix A: Alternate Graphical Models

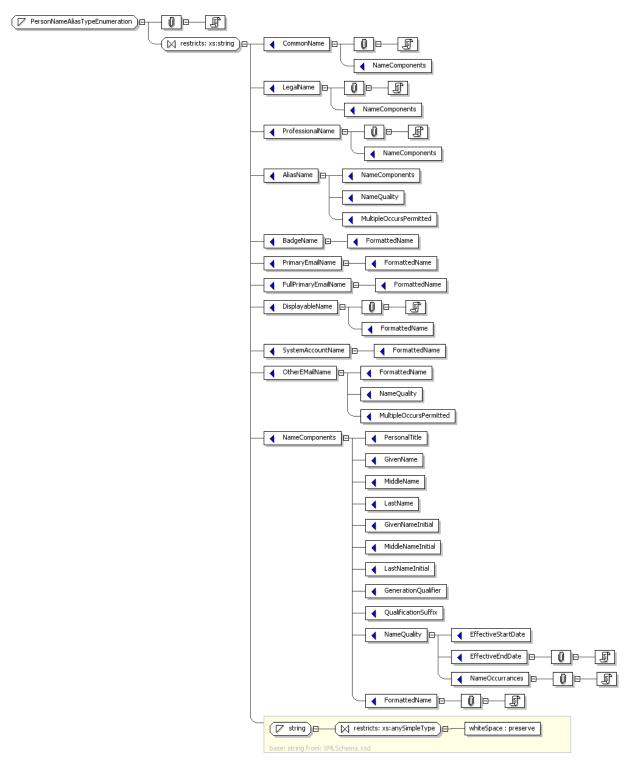
ER Graphical Model:



XML Model Part 1



XML Model Part 2



XML Model Text

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XMLSpy v2006 sp1 U (http://www.altova.com) by Navin Mathur (NSW Police) -->
<xs:schema xmlns="urn:oasis:names:tc:ciq:xnl:3" xmlns:xs="http://www.w3.org/2001/XMLSchema"</p>
targetNamespace="urn:oasis:names:tc:cig:xnl:3" elementFormDefault="qualified" attributeFormDefault="qualified">
  <xs:annotation>
    <xs:documentation>
   Specification Name: OASIS CIQ TC - extensible Name Language Types (xNL-types)
   Description: Defines the W3C schema that provides enumeration lists t support xNL
   Produced by: OASIS Customer Information Quality Technical Committee
   Version: 3.0
   Status: Public Review Draft
   Copyright: 2006, OASIS
   Last Modified: 05 April 2006
   Last Modified by: Ram Kumar
   NOTE: This is the schema that users can customise the enumeration lists to meet their
   exchange requirements
    </xs:documentation>
  </xs:annotation>
  <xs:simpleType name="string">
   <xs:annotation>
      <xs:documentation>A common format for a length - constrained string.
   </xs:annotation>
   <xs:restriction base="xs:string">
      <xs:maxLength value="255"/>
      <xs:whiteSpace value="collapse"/>
   </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="PersonNameElementEnumeration">
    <xs:annotation>
      <xs:documentation>A list of person name element types, e.g. First Name, Last Name, Title,
etc.</xs:documentation>
   </xs:annotation>
   <xs:restriction base="xs:string">
     <xs:enumeration value="PersonalTitle">
       <xs:annotation>
          <xs:documentation>A title signifies some sort of status, such as Mr, Miss, Ms (marriage status), or education
such as Professor, PhD, Dr, etc.</xs:documentation>
       </xs:annotation>
      </xs:enumeration>
     <xs:enumeration value="GivenName">
       <xs:annotation>
         <xs:documentation>The most important name element by which this particular individual is identified in the
group. E.g. John, Sam, Brian for Anglo-Saxon cultures.</xs:documentation>
       </xs:annotation>
      </xs:enumeration>
     <xs:enumeration value="MiddleName">
       <xs:annotation>
          <xs:documentation>Name elements related to additional identification of the individual, such as names are
parents or places.</xs:documentation>
       </xs:annotation>
      </xs:enumeration>
      <xs:enumeration value="Surname">
       <xs:annotation>
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<xs:documentation>Name element that identifies the group the individual belongs to and is identified by, such
as Last Name, Surname, Family Name, etc. </xs:documentation>
       </xs:annotation>
     </xs:enumeration>
     <xs:enumeration value="GenerationQualifier">
       <xs:annotation>
         <xs:documentation>Junior. Senior. The Second. IV. etc.</xs:documentation>
       </xs:annotation>
     </xs:enumeration>
     <xs:enumeration value="QualificationSuffix">
       <xs:annotation>
         <xs:documentation>The place where the person comes from is often used as part of the name, but this can be
mapped to middle name or other names, if necessary.</xs:documentation>
       </xs:annotation>
     </xs:enumeration>
     <xs:enumeration value="FormattedName">
       <xs:annotation>
         <xs:documentation>This is the complete name, with all of it's parts put together.</xs:documentation>
       </xs:annotation>
     </xs:enumeration>
   </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="PersonNameAliasTypeEnumeration">
    <xs:annotation>
     <xs:documentation>A list of common alias types for person </xs:documentation>
   </xs:annotation>
   <xs:restriction base="xs:string">
     <xs:enumeration value="CommonName">
       <xs:annotation>
         <xs:documentation>Indicates that the party prefers to be called by this name</xs:documentation>
       </xs:annotation>
       <xs:enumeration value="NameComponents"/>
     </xs:enumeration>
     <xs:enumeration value="LegalName">
       <xs:annotation>
         <xs:documentation>An official name of the person, e.g. as in the passport. incorporation certificate;
combination from the following: given name, first initial, or middle initial, or middle name depending on persons
preference, with last name.</xs:documentation>
       </xs:annotation>
       <xs:enumeration value="NameComponents"/>
     </xs:enumeration>
     <xs:enumeration value="ProfessionalName"><xs:annotation>
       <xs:documentation>Flexible selection from NameComponents: Could be maiden name, or other name that is
professionally recognized for that person</xs:documentation>
     </xs:annotation><xs:enumeration value="NameComponents"/></xs:enumeration>
     <xs:enumeration value="AliasName">
       <xs:enumeration value="NameComponents"/>
       <xs:enumeration value="NameQuality"/>
       <xs:enumeration value="MultipleOccursPermitted"/>
     </xs:enumeration>
     <xs:enumeration value="BadgeName"><xs:enumeration value="FormattedName"/></xs:enumeration>
     <xs:enumeration value="PrimaryEmailName"><xs:enumeration value="FormattedName"/>
     </xs:enumeration>
     <xs:enumeration value="FullPrimaryEmailName"><xs:enumeration value="FormattedName"/>
     </xs:enumeration>
     <xs:enumeration value="DisplayableName"><xs:annotation>
       <xs:documentation>Associated with EMail account - the displayable portion of the email.
```

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```
</xs:annotation><xs:enumeration value="FormattedName"/></xs:enumeration>
     <xs:enumeration value="SystemAccountName">
       <xs:enumeration value="FormattedName"/>
     </xs:enumeration>
     <xs:enumeration value="OtherEMailName">
       <xs:enumeration value="FormattedName"/>
      <xs:enumeration value="NameQuality"/>
       <xs:enumeration value="MultipleOccursPermitted"/>
     </xs:enumeration>
     <xs:enumeration value="NameComponents">
       <xs:enumeration value="PersonalTitle"/>
      <xs:enumeration value="GivenName"/>
      <xs:enumeration value="MiddleName"/>
      <xs:enumeration value="LastName"/>
      <xs:enumeration value="GivenNameInitial"/>
       <xs:enumeration value="MiddleNameInitial"/>
       <xs:enumeration value="LastNameInitial"/>
       <xs:enumeration value="GenerationQualifier"/>
       <xs:enumeration value="QualificationSuffix"/>
      <xs:enumeration value="NameQuality">
        <xs:enumeration value="EffectiveStartDate"/>
        <xs:enumeration value="EffectiveEndDate"><xs:annotation>
          <xs:documentation>
            This will be open ended (no value entered) for names that have not changed / current name.
          </xs:documentation>
        </xs:annotation></xs:enumeration>
        <xs:enumeration value="NameOccurrances"><xs:annotation>
          <xs:documentation>Contains sequence count number of the name.</xs:documentation>
        </xs:annotation></xs:enumeration>
       </xs:enumeration>
       <xs:enumeration value="FormattedName"><xs:annotation>
        <xs:documentation>Already formatted from name components.
      </xs:annotation>
      </xs:enumeration>
     </xs:enumeration>
   </xs:restriction>
 </xs:simpleType>
</xs:schema>
```