



Person Name DTD/Schema

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Authors: Mark Marsden, Ultimate Software
Kimberly Bartkus, J. D. Edwards
Andreas Bold, SAP
Tim Farlow, Authoria
Don Simonson, Robert Haft International

Contributors: Members of the Cross Process Objects work group

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Objective

Create a Schema/DTD design for a person's name that is flexible enough to be a global standard, which may be used within other HR-XML Consortium DTD's.

Relationship to Business Processes

Almost all HR Business processes pass information regarding individuals, the most common data being the person's name. Names have many components, and these components may vary by country or ethnicity - a Latin American name is very different from a Chinese name. Names may vary by purpose as well. For example, a resume for a performer may contain both a professional name and a legal name. Many business processes today either treat names as a monolithic string, or force names into first/middle/last components. This **PersonName** schema attempts to represent names for a broad array of cultures and purposes so that business processes can pass names reliably and completely, and in a format that can be efficiently processed

Scope

Within Scope

- Define the Name structure for use in other schemas defined by the HR-XML Consortium.

Outside of Scope

- Effective Dating will not be addressed within this proposal. When effective dating is resolved, this proposal will be re-evaluated to assess the impact.
- While it is important to understand how systems store a person's name and how the different elements of a name are concatenated to form a full name, this proposal does not recommend nor imply how a name should be stored in a database. It also does not address sorting or reporting formats for a name.

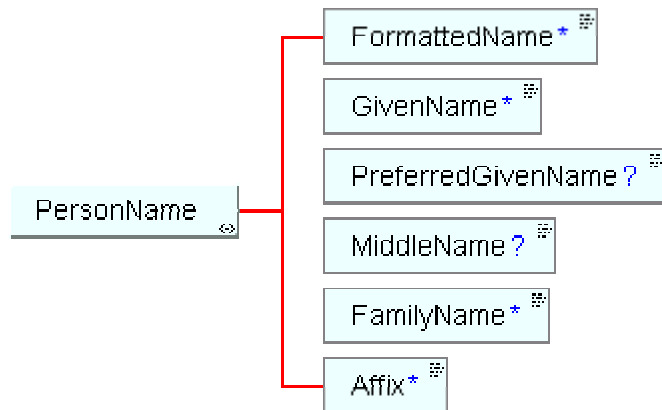
Design Requirements

Must be able to handle multiple purposes or contexts of the name (i.e. Employee, Supervisor, Dependant, Beneficiary, etc).

- Must be able to handle various name formats without a lot of overhead.
- Syntax must be self-documenting.
- Must take cultural context into account. Cultural context drives the sort order for a name. It also determines how the various parts of the name are put together to form the whole name.
- Should be able to handle effective dating.

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Schema/DTD Design



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Schema/DTD Elements Explained

Element / Attribute	Content Model	Description
PersonName	Required element.	Element used to identify the Person element as a PersonName .
PersonName FormattedName	Optional element. Up to 3 occurrences.	Contains, in one string, a fully formatted name with all of its pieces in their proper place. This includes all of the necessary punctuation. This de-normalized form of the name cannot be easily parsed.
PersonName FormattedName type=	Defaulted attribute.	Defines the purpose of the formatted name. type="presentation" Default value. Associated element contains the full name exactly as it would appear on a purchase order, envelope, etc. type="sortOrder" Associated element contains the name, as it would appear in ordered lists. type="legal" Associated element contains the full name exactly as it would appear on legal documents.
PersonName GivenName	Optional element. 0 to many occurrences.	Contains the given or chosen name. Also known as a person's first name. If multiple GivenNames are used, the order is implied.
PersonName PreferredGivenName	Optional element. One occurrence.	Contains the chosen name by which the person prefers to be addressed. Note: This name may be a name other than a given name, such as a nickname.
PersonName MiddleName	Optional element. 0 to many occurrences.	Contains a person's middle name or initial.
PersonName FamilyName	Optional element. 0 to many occurrences.	Contains the non-chosen or inherited name. Also known as a person's last name in the Western context.
PersonName FamilyName primary=	Defaulted attribute.	Defines the order when multiple family names are used. primary="true" Specifies that this occurrence of familyName is primary. It would appear first when multiple familyNames are used. primary="false" Specifies that this occurrence of familyName is not primary. It would appear after the primary familyName. When multiple 'False' primary familyNames are used, the order is implied. primary="undefined" Default specifies that multiple familyNames do not apply. If multiple familyNames are used with this type, order is implied.

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Element / Attribute	Content Model	Description
PersonName Affix	Optional element. 0 to many occurrences.	Contains the remaining parts of the PersonName as defined by the type attribute.
PersonName Affix type=	Required attribute.	Defines the context for the affix. type="aristocraticTitle" i.e. Baron, Graf, Earl, etc. type="aristocraticPrefix" i.e. Von, etc. type="formOfAddress" Contains the Salutation, i.e. Mr., Mrs., Hon., Dr., etc. type="familyNamePrefix" Contains the part of the person's name that precedes the family name. i.e. Van den, Von, etc. type="generation" i.e. Sr., Jr., III (the third), etc. type="qualifications" Contains the letters used to describe the academic qualifications held by a person and/or the distinctions conferred upon them. i.e. PhD, MD, CPA, MCSD, etc.

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Reference Examples

The following table lists the methods that various cultures use for representing a person's name. It is intended to make the implementer aware of how diverse a person's name can be. This table should serve as a guide and not the final word on how a culture represents a person's name.

Country	Examples
English (AngloAmerican)	<p>The first and last name may be combined into one name or parsed into given and family name. The following two examples will display 'John Smith'.</p> <pre><PersonName> <GivenName>John</GivenName> <FamilyName>Smith</FamilyName> </PersonName> <PersonName> <FormattedName>John Smith </FormattedName> </PersonName></pre> <p>Mrs. Jane H. Doe</p> <pre><PersonName> <GivenName>Jane</GivenName> <MiddleName>H.</MiddleName> <FamilyName>Doe</FamilyName> <Affix type="formOfAddress">Mrs</Affix> </PersonName></pre>
French	<p>The abbreviation is used before the proper name or title of the person. If unsure a woman is married, use the married form.</p> <p>M. Paul Martin (masculine, singular) M^{me} Pauline Martin (feminine, singular, married woman) M^{lle} Anne Martin (singular, unmarried)</p> <p>M. Paul Martin</p> <pre><PersonName> <GivenName>Paul</GivenName> <FamilyName>Martin</FamilyName> <Affix type="formOfAddress">M.</Affix> </PersonName></pre>
Dutch	<p>Dhr. Peter van Zonderland (for a man) Mevr. Maria de Wit (for a woman)</p> <pre><PersonName> <GivenName>Maria</GivenName> <FamilyName>Wit</FamilyName> <Affix type="formOfAddress">Mevr.</Affix> <Affix type="familyNamePrefix">de</Affix> </PersonName></pre>

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Country	Examples
Korean	<p>Kim, Chul-soo</p> <pre> <PersonName> <GivenName>Chul-soo</GivenName> <FamilyName>Kim</FamilyName> </PersonName> </pre> <p>The name represents 3 Korean characters. „Kim“ is the last name, and „Chul-Soo“ is the first name.</p> <p>In Korea, the last name always comes first.</p> <p>The State department recommends using a hyphen between the two Korean characters of any Korean first name as shown in the exemplary name above.</p> <p>Another rule to keep in mind is the second Korean character of any Korean first name starts with a small character as a small ,s' is used in „Chul-soo“.</p>
Mexico	<p>Sr. Fernando Martínez Urrutia</p> <pre> <PersonName> <GivenName>Fernando</GivenName> <FamilyName>Martinez Urrutia</FamilyName> <Affix type="formOfAddress">Sr</Affix> </PersonName> </pre> <p>OR</p> <pre> <PersonName> <GivenName>Fernando</GivenName> <FamilyName primary="false">Martinez</FamilyName> <FamilyName primary="true">Urrutia</FamilyName> <Affix type="formOfAddress">Sr</Affix> </PersonName> </pre> <p>The title or abbreviation of the individual's status is used before the proper name.</p> <p>Sr. Fernando Martínez Urrutia (singular for Mr.)* Srita. Eugenia González Pérez (Singular for Miss)** Sra. Teresa Fernández de Aguilar (singular for Misses)***</p> <p>*Males always keep two surnames; the father's last name first and the mother's maiden name last.</p> <p>**Single women use the father's surname first and the mother's maiden name last.</p> <p>***Married woman keep the father's last name and add the husband's last name, followed by the preposition de.</p> <p>If the individual holds one of the following degrees they should be acknowledged as it follows:</p> <p>Ing. (Engineer; masculine and feminine)</p>

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Country	Examples
	<p>Lic. (It indicates that the individual it is, either a lawyer, or holds a Bachelor's Degree; masculine and feminine)</p> <p>Dr. (Masculine for a physician, surgeon, dentist, veterinarian or the person that holds a PhD)</p> <p>Dra. (Femenine for a physician, surgeon, dentist, veterinarian or the person that holds a PhD)</p>
Portuguese	<p>The following abbreviations are used before the proper name or title of the person:</p> <p>Sr. João da Silva (masculine, singular)</p> <p>Sra. Maria da Silva (feminine, singular, married woman)</p> <p>Srta. Maria da Silva (feminine, singular, unmarried)</p> <pre> <PersonName> <GivenName>Maria</GivenName> <FamilyName>Silva</FamilyName> <Affix type="formOfAddress">Srta.</Affix> <Affix type="familyNamePrefix">da</Affix> </PersonName> </pre>
Japanese	<p>Yamada Taro</p> <pre> <PersonName> <GivenName>Yamada</GivenName> <FamilyName>Taro</FamilyName> </PersonName> </pre> <p>Japanese have two native alphabets: Hiragana and Katakana. Hiragana is used for writing native Japanese words. Katakana is used for writing non-Japanese words. A Japanese name would be written in Hiragana, a non-Japanese name in Katakana. Together the alphabets are known as Kana. Koseki is a family register and may be used with Kana or Romaji. The roman character set is known as Romaji.</p> <p>It is recommended that an implementation using multiple character sets, would use a different PersonName element for each character set.</p>
Simplified Chinese (Mainland China)	<p>In writing, there are two forms of salutation: in Chinese characters or in Pinyin, the National Phonetic Alphabet, which is a standard system.</p> <p>In Chinese characters: the person's full name (formal) or last name (informal) is followed by •• (Mr.), or ••(Mrs.), or •• (Ms.), depending upon the person's gender and marriage status. It is always safe to use •• (Mrs) if you don't know the lady's marriage status. The following are some examples:</p> <p>(Formal)</p> <p>••••• (Mr. Zhang, Xiaowei)</p> <p>•••• (Mrs. Jin, Li)</p> <p>•••• (Ms. Liu, Fang)</p> <p>(Informal)</p> <p>••• (Mr. Zhang)</p> <p>••• (Mrs. Jin)</p> <p>••• (Ms. Liu)</p>

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Country	Examples
	<p>In Pinyin: Mr./Mrs./Ms. is used before the person's full name or last name. For example:</p> <p>(Formal) 1. Mr. Xiaowei Zhang or Mr. Zhang, Xiaowei Mrs. Li Jin or Jin, Li. Ms. Fang Liu or Ms. Liu, Fang</p> <p>(Informal) Mr. Zhang Mrs. Jin Ms. Liu</p> <p>Note: Please be aware that in Pinyin form, it can be either first name first or last name first, except that in the latter, the last name and first name should be separated by a comma. In practice, last name first method is preferred.</p> <p>Also, note that the sort order for Chinese characters is often based on the number of strokes in the symbol. The Chinese character set is used here. However, some operating systems don't recognize this set and may be displayed as asterisks or other symbols.</p>
Traditional Chinese	<p>A person's last name is followed by the Chinese equivalent of Mr. and Ms. in both written and spoken Chinese. If a female is known to be married, her husband's last name followed by Mrs. is also acceptable.</p>
Spain	<p>Married females hold their original name, father's surname first and the mother's maiden name last.</p>
Argentina and other South American Countries	<p>In these countries only one last name is used, males and females, which is the father's last name. Married women use the husband's last name optionally.</p>
India	<p>"Prabhakar Santhanam". Considered a first name and a last name. Some Indians have middle names. Often written as "S. Gowtham" - the family name initial and then the given name. Nicknames are common, in this example "Prabhu".</p>
Greece	<p>"Theodoros Papangelis". Considered a first name and last name. There are no middle names in Greece. Wives almost always take the husband's name. The first name is commonly taken from the paternal grandparents, either the grandmother or the grandfather depending on the gender of the child. Most first names are names of Saints.</p>
Russia	<p>"Mikhail Sergeyevich Gorbachov". Considered a given name, middle name, family name. The family name has a different form for males vs. females. The middle name is often a variant of the father's given name. Nick names (also called 'short name') are common, e.g. "Misha". There is no "Dr." or "Jr." or any other common suffix or prefix. Aristocratic titles are at the front, but are exceedingly rare since the onset of communism.</p>

Implementation Considerations

- One use of the affix would be to sort a family name prefix. For example if Von Meter is defined as one element it would be sorted based on the letter V, if it is stored as two elements, it may be sorted based on the letter M or V. For example:
 <FamilyName>Von Meter</FamilyName> will always sort on 'V', whereas
 <FamilyName>Meter</FamilyName>
 <Affix type="FamilyNamePrefix">Von</affix> can sort on either element.
- A person can have multiple names. There are a number of ways of looking at this:
 - 1) A person has multiple family names. Some systems break out these multiple family names into separate data elements. Other systems store the multiple family names as one data element. This design will handle both approaches to family name. Implementations of this schema must be aware that the family name could be sent using either format, and respond accordingly. It is expected that if a person has multiple family names, and the names are passed as separate elements, they are passed in the order they would be concatenated to build a name string. (i.e. Fernando Martinez Urrutia)
 correct: <GivenName>Fernando</GivenName> <FamilyName primary="false">Martinez</FamilyName>
 <FamilyName primary="true">Urrutia</FamilyName>.
 incorrect: <GivenName>Fernando</GivenName> <FamilyName primary="true">Urrutia</FamilyName>
 <FamilyName primary="false">Martinez </FamilyName>
 2) A person has different names for different situations. A woman may use her maiden name for professional reasons and her married name for legal/other reasons. If several versions of a person's name need to be passed for a given context, then the schema design should allow for multiple names at the context level.
 - 3) A person's name may be represented using different alphabets. For example, in Japan, a person could have a western style name, a Kana name and/or a Romaji name. Each name uses a different alphabet and may require different elements. (See known limitations)
- Certain parts of a name could end with a period such as an initial or the salutation. Some systems may store the period as part of the name. Other systems may not store the period, but add it when formatting the name.
- The <MiddleName> element could contain an initial, an initial followed by a period, or a full name.
- A person may have a hyphenated name. An example of this is when a woman gets married and changes her family name to include her husband's family name. (i.e. Courtney Thorne-Smith). This design would treat the two family names as one. i.e. <FamilyName>Thorne-Smith</FamilyName>
- When a person's name needs to be sent for legal purposes, it is recommended that the sender use the **FormattedName** element with the attribute **type="legal"** in addition to sending the other name elements. This insures the properly formatted name for legal use.
- The **PersonName** content model has no required elements. This is meant to keep the design flexible in terms of handling a wide variation of names. Someone, such as Madonna or Prince, may only have one name. It may be considered their given name, or their family name. This representation should be put into the FamilyName element. In general, however, the given name and the family name are elements that span the most cultures and fit the most contexts.
- If there is a need to pass a person's initials (i.e. <initials>MJM</initials>), the element would not be part of the **PersonName** content model. It would need to be defined separately.
- If a previous family name (also known as maiden name) needs to be sent for reasons other than building/formatting a person's name, such as a security token, it is assumed the DTD/Schema will define a separate data element for this purpose.
- Business rules must be enforced to eliminate the possibility of multiple primary FamilyName elements.

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Exception Handling

Not applicable.

Known Limitations

- This design may not represent names in all cultural contexts. We need the ability to extend the schema.
- Some cultures use different alphabets to represent the same name. In Japan, a person has their name represented using a western alphabet, using a native Japanese alphabet (Kana) and using a roman alphabet (Romaji). This design does not handle multiple representations of the same name within a single **PersonName** content model.

Outstanding Issues

- The method for extending DTD/Schema's needs to be defined. The Technical Steering Committee will be asked for guidance in this area.

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Appendix A – Schema/DTD Source

```
<!-- Copyright 2000 The HR-XML Consortium (TM) -->
<!-- version 1.0  October 17 2000 -->
<!-- 11/05/2000 Changed all elements to UpperCamelCase -->

<!ELEMENT PersonName (FormattedName* , GivenName* , PreferredGivenName? ,
MiddleName? , FamilyName* , Affix* )>

<!ELEMENT FormattedName (#PCDATA )>
<!ATTLIST FormattedName type (presentation | legal | sortOrder ) 'presentation' >

<!ELEMENT GivenName (#PCDATA )>

<!ELEMENT PreferredGivenName (#PCDATA )>

<!ELEMENT MiddleName (#PCDATA )>

<!ELEMENT FamilyName (#PCDATA )>
<!ATTLIST FamilyName primary (true | false | undefined ) 'undefined' >

<!ELEMENT Affix (#PCDATA )>
<!ATTLIST Affix type (academicGrade |
aristocraticPrefix |
aristocraticTitle |
familyNamePrefix |
familyNameSuffix |
formOfAddress |
generation ) #REQUIRED >
```

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Appendix B - Schema/DTD Revision History

Version	Date	Revisions
v00.00	4/22/2000	Initial Draft
v00.02	5/10/2000	Initial Draft rev #2
v00.03	5/18/2000	Initial Draft rev #3
v00.04	5/22/2000	Initial Draft with full list of outstanding issues.
v00.00.05	5/26/2000	First Draft with all outstanding issues addressed. This is the first draft candidate for submission to the Consortium.
V01.00.00	7/17/00	Draft modified to resolve issues brought up by TSC and International work group. This version will be presented to the Consortium for approval.
V01.00.01	9/05/2000	Modified for readability.
V01.00.02	9/06/2000	Added missing ATTLIST under familyName.
V01.00.03	9/07/200	Added primary= attribute to multiple family name examples on page 8 and 9.
V01.00.04	9/09/00	Combined Appendix C with Reference Examples.
V01.00.05	9/18/00	Removed supervisor/employee tags from reference examples. Modified attributes for consistency.
V1.0	10/06/00	Clarified Reference Example description. Format changes to reference examples, clarified Japanese example. This version will be presented to the general membership for review/approval.
V1.0	10/27/00	Added copyright information. This version has been approved by the HR-XML Consortium.
V1.0	11/05/00	Changed all elements to UpperCamelCase.