Address Specifications

Version: 1.2
Date: August 14, 2014
Author: Valerie Smothers and Prasad Chowdavarapu
Author email: vsmothers@gmail.com

Version History

Version No.	Date	Changed By	Changes Made
1.0	27 June 2008		
1.1	16 August 2013	Valerie Smothers	Applied common attributes to Address: id, source, validityDate, restrictions. Changes namespace to http://ns.medbiq.org/address/v2/.
1.2	14 August 2014	Valerie Smothers and Prasad Chowdavarapu	Added documentation for CountryTypeWithAttributes.

MedBiquitous Consortium XML Public License and Terms of Use

MedBiquitous XML (including schemas, specifications, sample documents, Web services description files, and related items) is provided by the copyright holders under the following license. By obtaining, using, and or copying this work, you (the licensee) agree that you have read, understood, and will comply with the following terms and conditions.

The Consortium hereby grants a perpetual, non-exclusive, non-transferable, license to copy, use, display, perform, modify, make derivative works of, and develop the MedBiquitous XML for any use and without any fee or royalty, provided that you include the following on ALL copies of the MedBiquitous XML or portions thereof, including modifications, that you make.

1. Any pre-existing intellectual property disclaimers, notices, or terms and conditions. If none exist, the following notice should be used: “Copyright © [date of XML release] MedBiquitous Consortium. All Rights Reserved. http://www.medbiq.org”
2. Notice of any changes or modification to the MedBiquitous XML files.
3. Notice that any user is bound by the terms of this license and reference to the full text of this license in a location viewable to users of the redistributed or derivative work.

In the event that the licensee modifies any part of the MedBiquitous XML, it will not then represent to the public, through any act or omission, that the resulting modification is an official specification of the MedBiquitous Consortium unless and until such modification is officially adopted.

THE CONSORTIUM MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, WITH RESPECT TO ANY COMPUTER CODE, INCLUDING SCHEMAS, SPECIFICATIONS, SAMPLE DOCUMENTS, WEB SERVICES DESCRIPTION FILES, AND RELATED ITEMS. WITHOUT LIMITING THE FOREGOING, THE CONSORTIUM DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY, EXPRESS OR IMPLIED, AGAINST INFRINGEMENT BY THE MEDBIQUITOUS XML OF ANY THIRD PARTY PATENTS, TRADEMARKS, COPYRIGHTS OR OTHER RIGHTS. THE LICENSEE AGREES THAT ALL COMPUTER CODES OR RELATED ITEMS PROVIDED SHALL BE ACCEPTED BY LICENSEE “AS IS”. THUS, THE ENTIRE RISK OF NON-PERFORMANCE OF THE MEDBIQUITOUS XML RESTS WITH THE LICENSEE WHO SHALL BEAR ALL COSTS OF ANY SERVICE, REPAIR OR CORRECTION.

IN NO EVENT SHALL THE CONSORTIUM OR ITS MEMBERS BE LIABLE TO THE LICENSEE OR ANY OTHER USER FOR DAMAGES OF ANY NATURE, INCLUDING, WITHOUT LIMITATION, ANY GENERAL, DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES, INCLUDING LOST PROFITS, ARISING OUT OF ANY USE OF MEDBIQUITOUS XML.

LICENSEE SHALL INDEMNIFY THE CONSORTIUM AND EACH OF ITS MEMBERS FROM ANY LOSS, CLAIM, DAMAGE OR LIABILITY (INCLUDING, WITHOUT LIMITATION, PAYMENT OF ATTORNEYS’ FEES AND COURT

COSTS) ARISING OUT OF MODIFICATION OR USE OF THE MEDBIQUITOUS XML OR ANY RELATED CONTENT OR MATERIAL BY LICENSEE.

LICENSEE SHALL NOT OBTAIN OR ATTEMPT TO OBTAIN ANY PATENTS, COPYRIGHTS OR OTHER PROPRIETARY RIGHTS WITH RESPECT TO THE MEDBIQUITOUS XML.

THIS LICENSE SHALL TERMINATE AUTOMATICALLY IF LICENSEE VIOLATES ANY OF ITS TERMS AND CONDITIONS.

The name and trademarks of the MedBiquitous Consortium and its members may NOT be used in advertising or publicity pertaining to MedBiquitous XML without specific, prior written permission. Title to copyright in MedBiquitous XML and any associated documentation will at all times remain with the copyright holders.

Table of Contents

1 Acknowledgements

The MedBiquitous Consortium wishes to acknowledge the help of the MedBiquitous Consortium Professional Profile Working Group members, staff, and other individuals that contributed to the creation of this document, including:

Chair:

- Amy Opalek, Foundation for the Advancement of international Medical Education and Research

Editor:

- Prasad Chowdavarapu, American Board of Family Medicine

Members

2 Members

- Archana Aida, American Board of Pediatrics
- Len Armstrong, DataCommons
- Kevin Clauson, American Association of Colleges of Pharmacy
- Mike Dugan, Federation of State Medical Boards
- James Fiore, American Board of Surgery
- Annette Gippe, American Osteopathic Association
- Jyothi Holla, American Board of Pediatrics
- Jim Jahrling, American Board of Medical Specialties
- Paul Jolly, Association of American Medical Colleges
- Donald Kooker, American Board of Internal Medicine
- Scott Kroyer, E-Value
- Kirke Lawton, Association of American Medical Colleges
- Purvi Maniar, American Board of Medical Specialties
- Alex Mankofsky, American Board of Surgery
- Jennifer Michael, American Board of Medical Specialties
- Ruth Nemire, American Association of Colleges of Pharmacy
- Kelly Reddick, American Board of Pediatrics
- Brenda Ruff, American Board of Medical Specialties
- Rob Seaner, Educational Commission for Foreign Medical Graduates
- Tarang Shah, American Osteopathic Association
- Cyndi Streun, Federation of State Medical Boards
- Patricia Thomas, American Association of Colleges of Nursing

Invited Expert

- Toby Vandemark

The MedBiquitous Technical Steering Committee contributed their expertise to ensure that this specification is well-designed and interoperable with related industry standards.

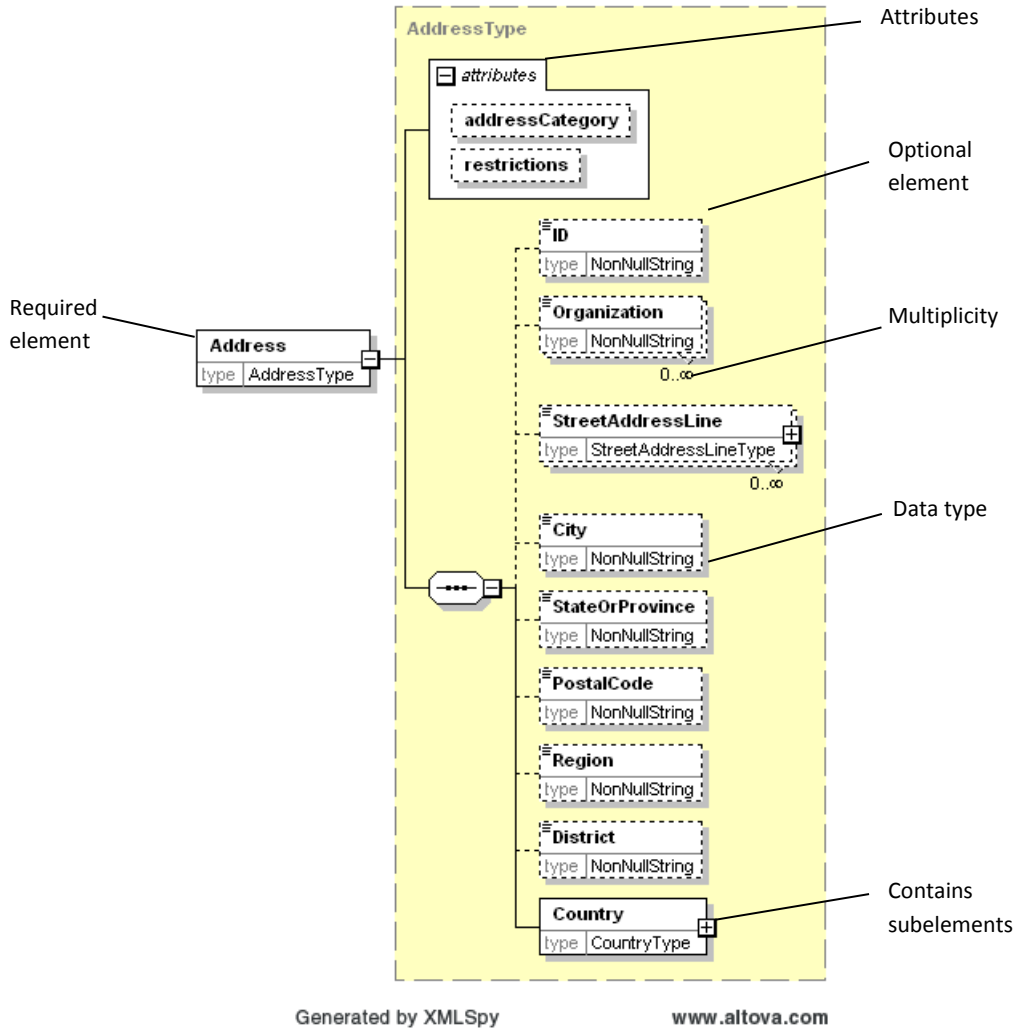
- Joel Farrell, Chair
- Dan Rehak, Learning Technologies Architect
- Prasad Chowdavarapu, American Board of Family Medicine
- James Fiore, American Board of Surgery
- Steve Kenney, American College of Surgeons
- Scott Kroyer, E*Value
- Andy Rabin, CECity
- Luke Woodham, St. George's University of London

3 Documentation Conventions

This document uses the following conventions:

Convention	Description
Bold Text	When used with an XML element name, indicates that the element contains sub-elements.
Italics	When used in an XML element description, an attribute of the XML element.
`Monospaced type`	Sample XML tags, code, schema, or portion thereof.

The document uses graphics generated by Altova XML Spy® software, which uses the following graphical conventions.



4 Conformance

To be a conformant instance of the MedBiquitous Address specification, an XML document:

- Shall validate against the XML Schema available at: http://ns.medbiq.org/address/v2/address.xsd
- Shall conform to any additional requirements stated in this specification.
- May include elements not defined in this document in permitted areas and only if those elements are namespace qualified.

5 Common Data Types

Most of the elements and attributes in MedBiquitous XML documents use the data types defined by the W3C XML schema definition [XML]. In some cases MedBiquitous creates its own datatypes as part of its best practices or to meet a specific requirement. Commonly used datatypes are defined in the common.xsd file. For more information about common datatypes, see MedBiquitous Common Specifications [Common].

6 Introduction

This document describes the MedBiquitous Address XML Schema in detail. It is intended for use by anyone who wants to exchange address information based on this specification. The status of the document is indicated at the bottom of the page; draft documents are subject to review and approval through the MedBiquitous Process (see http://medbiq.org/std_specs/devprocess/MedBiquitousANSIProcess.pdf).

The objective of this Address Schema is to provide a data structure that allows one to represent an address in a standard format. It can be used alone or imported into other XML schema that must represent addresses. It is designed to be highly reusable.

Address data is essential to professional societies, certifying boards, licensing boards, universities, and industry partners and is often exchanged among these entities for many purposes. A standard format for this data will simplify business processes for these organizations and could reduce administrative costs as well.

We encourage the use of this schema within other schema.

7 Other Standards, Specifications, or Schemas Referenced

This standard references the following standards, specifications, or schemas. The informative references here, which describe how these references are used, link to formal references appearing later in this document.

- MedBiquitous Common Specifications [Common]
  The Common schema contains common datatypes used by many MedBiquitous schemas. Address uses the NonNullStringType and Common Attributes.

- Country Codes - ISO 3166 [ISO 3166]
  These are Country Codes from the International Organization for Standardization. Address uses these codes to encode country abbreviations in a manner consistent with the international community.

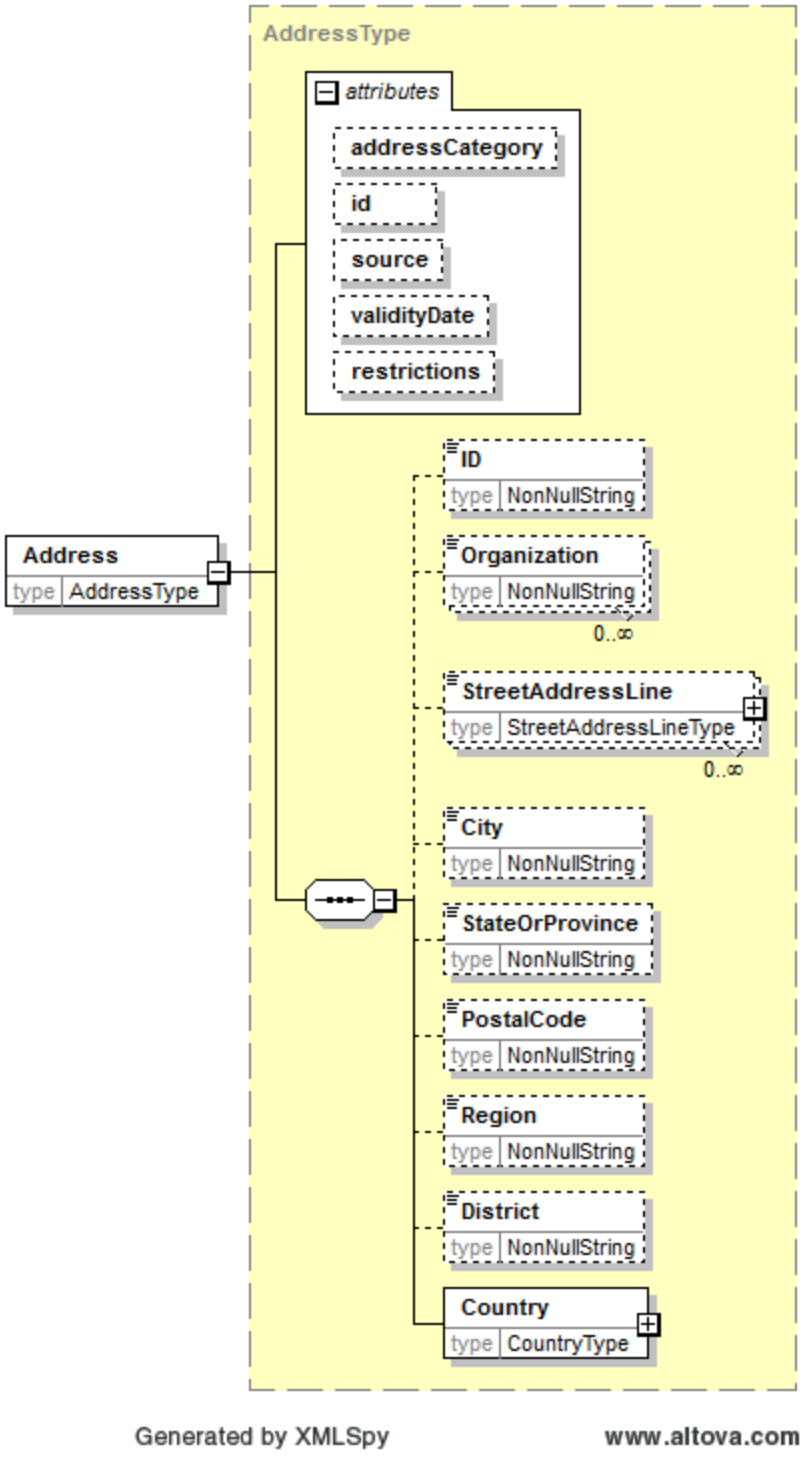
8 Address Schema

The following sections explain the Address Schema grammar. Values in **bold** under XML Tags column indicate that the element has sub-elements.

All the elements having sub-elements will be defined in separate sections. All elements without sub-elements will be defined within the appropriate element sections that use them.

8.1 Address

Address is the root element. It contains subelements that define an address.



Address Information

Element	Description	Required	Multiplicity	Datatype
Address	Address is the root element. It contains sub-elements that define define a postal address in detail. Address has the following attribute: *addressCategory* Indicates the type of address. Valid values are: Residential, Business, Undeliverable. *id* A unique identifier for this piece of data. The identifier must be unique within the scope of the Healthcare Professional Profile document. *source* The source of this piece of data. *validityDate* The date this piece of data was deemed valid. For example, the date of entry. *restrictions* Indicates whether this address is to be unrestricted, restricted, or confidential when sharing information with partner organizations or the general public. Valid values are: Unrestricted, Restricted, Confidential. Unrestricted indicates that a piece of data may be shared or published. Restricted indicates that a piece of data may be shared in some instances, but not published. Policies must be defined surrounding the use of restricted data. Confidential indicates that a piece of data may not be shared or published.	Required	1	Container

ID (Change to AddressID?)	ID is a subelement of the root Address. ID defines a unique identifier for a specific address.	Optional	0 or 1	Non-null string
Organization	Organization is a subelement of the root Address. Organization defines a company, institution, or department that is part of the address. For example, Department of Internal Medicine. When used multiple times, the order of appearance indicates the order in a formatted address.	Optional	0 or more	Non-null string
StreetAddressLine	StreetAddressLine is a subelement of the root Address. It defines a single line of a street address. For example, 10 Kensington High Street. When used multiple times, the order of appearance indicates the order for the address lines in a formatted address. StreetAddressLine has the following attribute: *restrictions* Indicates whether this street address is to be unrestricted, restricted, or confidential when sharing information with partner organizations or the general public. Valid values are: Unrestricted, Restricted, Confidential. Unrestricted indicates that a piece of data may be shared or published. Restricted indicates that a piece of data may be shared in some instances, but not published. Policies must be defined surrounding the use of restricted data. Confidential indicates that a piece of data may not be shared or published.	Optional	0 or more	Non-null string

City	City is a subelement of the root Address. City defines the name of the city, town, or village included in the address. For example, London.	Optional	0 or 1	Non-null string
StateOrProvince	StateOrProvince is a subelement of the root Address. It defines the name of the state, province, or territorial division within a country. For example, British Columbia.	Optional	0 or 1	Non-null string
PostalCode	PostalCode is a subelement of the root Address. It defines the zipcode or other postal code used to facilitate the sorting of mail. For example, 21202.	Optional	0 or 1	Non-null string
Region	Region is a subelement of the root Address. Region defines a non-administrative division of a country, or a commonly used name for a grouping of countries. For example, Central America.	Optional	0 or 1	Non-null string
District	District is a subelement of the root Address. District defines a non-administrative division of a city, state, province, or country, as part of an address.	Optional	0 or 1	Non-null string
Country	Country is a subelement of the root Address. It contains elements that define the country name and country code. See the section Country for more information.	Required	1	Container

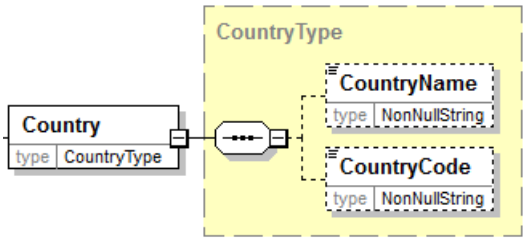
Example:

```
   <Address addressCategory = "Business" restrictions = "Unrestricted">
      <Organization>Department of Cardiac Surgery</Organization>
      <Organization>Johns Hopkins School of Medicine</Organization>
      <StreetAddressLine restrictions = "Unrestricted">Blalock
618</StreetAddressLine>
      <StreetAddressLine restrictions = "Unrestricted">600 N. Wolfe
Street</StreetAddressLine>
      <City>Baltimore</City>
      <StateOrProvince>MD</StateOrProvince>
      <PostalCode>21287</PostalCode>
      <Country>
```

```
        <CountryCode>US</CountryCode>
    </Country>
</Address>
```

8.2 Country

Country contains subelements that define a country name and ISO 3166 alpha country code.



Country Information

Element	Description	Required	Multiplicity	Datatype
Country	Country is a subelement of the root Address. It contains elements that define the country name and country code.	Required	1	Container
CountryName	CountryName is a subelement of Country. It defines the name of the country included in the address. For example, Switzerland.	Optional	0 or 1	Non-null string
CountryCode	CountryCode is a subelement of Country. It defines the ISO 3166 alpha code for a particular country. For Switzerland, the country code is CH.	Optional	0 or 1	Non-null string

Example:

```
<Country>
   <CountryName>Switzerland</CountryName>
   <CountryCode>CH</CountryCode>
</Country>
```

9 CountryTypeWithAttributes

The address.xsd schema defines a datatype for representing a country name or country code together with common attributes used to indicate an identifier, source, the date the data becomes or became valid, and any restrictions on the distribution of this data.

The following table defines characteristics of Elements of type CountryTypeWithAttributes.

Country Information

Element	Description	Required	Multiplicity	Datatype
Any element of type CountryTypeWithAttributes	An element of type CountryTypeWithAttributes has the following attributes: *id* A unique identifier for this piece of data. The identifier must be unique within the scope of the Healthcare Professional Profile document. *source* The source of this piece of data. *validityDate* The date this piece of data was deemed valid. For example, the date of entry. *restrictions* Indicates whether this address is to be unrestricted, restricted, or confidential when sharing information with partner organizations or the general public. Valid values are: Unrestricted, Restricted, Confidential. Unrestricted indicates that a piece of data may be shared or published. Restricted indicates that a piece of data may be shared in some instances, but not published. Policies must be defined	Required	1	Container

	surrounding the use of restricted data. Confidential indicates that a piece of data may not be shared or published.			
CountryName	CountryName is a subelement of Country. It defines the name of the country included in the address. For example, Switzerland.	Optional	0 or 1	Non-null string
CountryCode	CountryCode is a subelement of Country. It defines the ISO 3166 alpha code for a particular country. For Switzerland, the country code is CH.	Optional	0 or 1	Non-null string

Example:

```
   <CountryOfBirth id="a123" source="ECFMG" validityDate="2014_01_01"
restrictions="Unrestricted">
      <a:CountryName>Switzerland</a:CountryName>
      <a:CountryCode>CH</a:CountryCode>
   </CountryOfBirth>
```

10 Sample XML Document

```
<?xml version = "1.0" encoding = "UTF-8"?>
<Address xmlns = "http://ns.medbiq.org/address/v1/"
xmlns:xsi = "http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation = "http://ns.medbiq.org/address/v1/
http://ns.medbiq.org/address/v1/address.xsd"
addressCategory = "Business" restrictions = "restricted">
   <StreetAddressLine>26-40 Kensington High Street</StreetAddressLine>
   <City>London</City>
   <PostalCode>W8 4PF</PostalCode>
   <Country>
      <CountryName>United Kingdom</CountryName>
   </Country>
</Address>
```

11 References

Common
MedBiquitous Common Specifications v 0.2.
http://www.medbiq.org/sites/default/files/CommonSpecifications.pdf . Accessed August 14, 2014.

ISO 3166
Codes for the representation of names of countries and their subdivisions,
http://www.iso.org/iso/country_codes/iso_3166_code_lists/. Accessed August 14, 2014.

XML
W3C Extensible Markup Language (XML) 1.0 (Fourth Edition), http://www.w3.org/TR/xml . Accessed January 26, 2012.