



**XML NAMESPACE STANDARDS
VERSION 1.0**

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Information and Technology Management Branch

❖ IM / IT Standards & Guidelines ❖

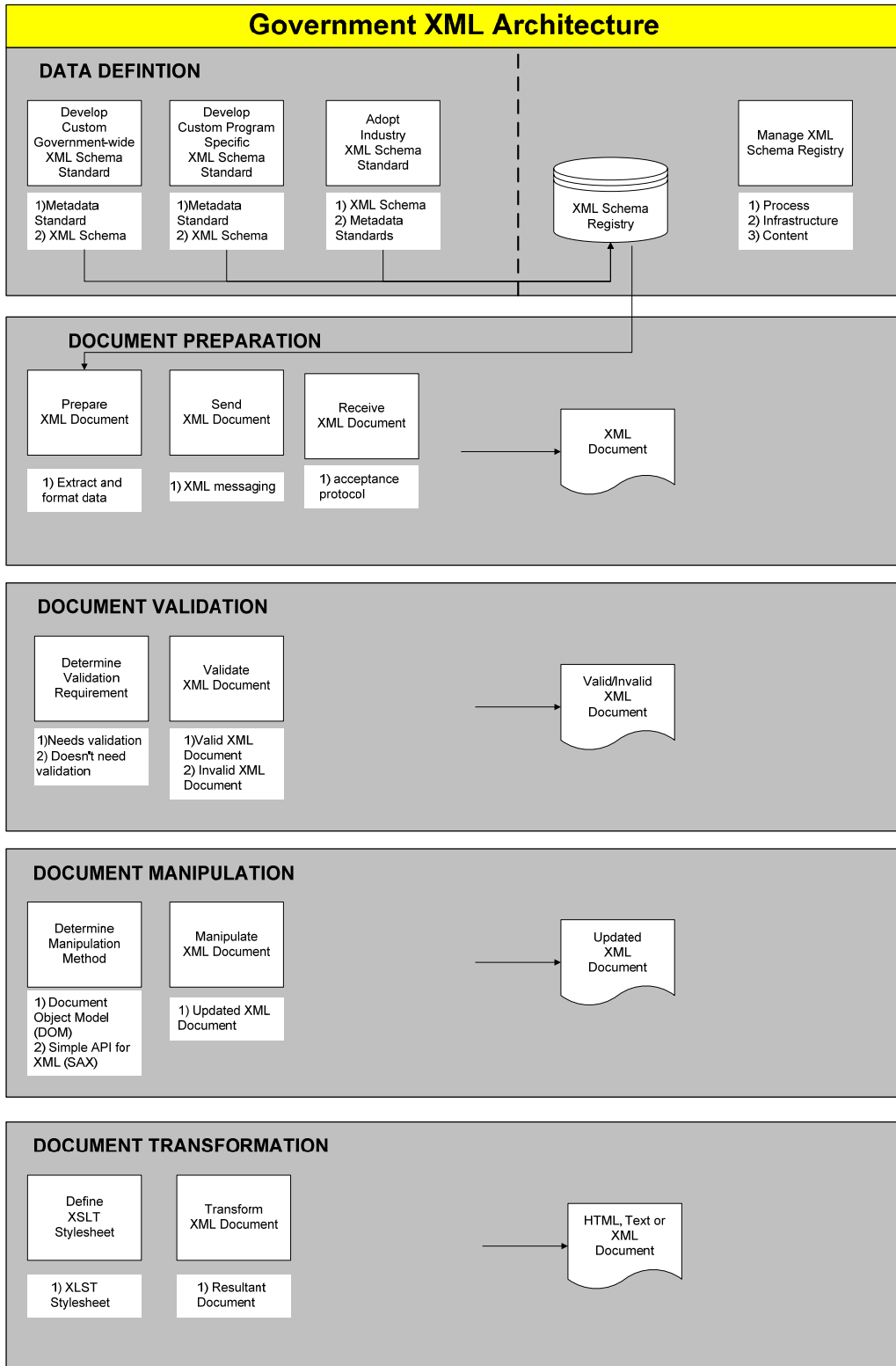
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1. XML Standards context

XML Technologies span a wide variety of areas and standards. Ministry ADE process has identified the following areas of XML where standards could be built and evolved. Standards for each area are covered in separate documents.

- *XML Core Standards* : [“well-formed-ness” standards].
- *XML Data Validation Standards* : [DTDs and Schemas standards]
- *XML Namespaces* : [standards on resolution of tags with similar tag names] **This document.**
- *XLink and XPointer* : [standards for creating hyperlinks in XML documents and standards for hyperlinks to point to more specific parts (fragments) in the XML document]
- *XML Catalogs* : [URL redirection standards]
- *XQuery* : [XML data querying standards]
- *XPath* : [standards on navigation through elements and attributes in an XML document]
- *XSL-FO (also known as XSL)* : [standards on formatting of XML data for output]
- *XSLT* : [standards on transforming XML documents]

The following diagram depicts the Government XML Architecture at a high level. This architecture is evolving and subject to changes :



2. Document Purpose

The purpose of this document is to provide a set of standards for XML namespaces. The document assumes that the reader has prior knowledge of XML and other related web technologies such as HTML, CSS etc. This document does not describe standards for XML documents to be well-formed and valid. These are described in separate documents.

3. XML Namespaces Standards

Namespaces are qualifiers that can be added to XML elements and attributes so that tags written by different developers with same names could be distinguished from one another. Prime motivation for using namespaces was to be able to mix tags with similar names from different sources (schema files). Namespaces were added to original XML specifications to resolve name conflict issues. Namespaces not only distinguish tags from one another but they also tell parsers and other XML applications on what to do when they encounter an element or an attribute in a particular namespace. Namespaces are vital to current XML based technologies such as XSLT, Web services, XML schema etc.

In order to use namespaces, they should be prefixed with the special attribute “**xmlns**”. Namespaces are only in scope within the element in which they are imported using “xmlns”. A namespace declaration therefore applies to the element in which the declaration appears, as well as children of that element even if it is not explicitly specified in the element.

In order to use the namespaces effectively in a document that combines elements from different sources, a namespace must have two parts :

- Unified Resource Identifier (URI) : This is the unique identifier (name) for the namespace. This is usually a URL but it need not necessarily be a URL and it doesn't have to follow any particular rules other than uniqueness. The *URI* for a namespace never changes.
- Local Name : *Local Name* is the alias by which the namespace will be known in a particular XML document. Local names are needed since the full URI could be long and thus inconvenient to add to every tag. Local name is completely arbitrary and need not be same from one document to another. *Local Name* is set on document by document basis within the “xmlns” attribute.

The Ministry ADE process supports and recommends the following standards for XML Namespaces :

1. The URI for all Ministry XML namespace usage is <http://www.xmlns.educ.gov.bc.ca/>. This URI is fixed and cannot be changed. This URI is to be followed by appropriate Schema (xsd) file name and related subfolder(s) names. Examples of fully qualified xsd files with namespaces :

<http://www.xmlns.educ.gov.bc.ca/registries/course/wSDL/abc0.1.xsd>
<http://www.xmlns.educ.gov.bc.ca/registries/course/bpel/xyz0.1.xsd>
<http://www.xmlns.educ.gov.bc.ca/registries/course/datatypes/pqr0.1.xsd>

The subfolders are to be named after a project or a group of similar projects (such as registries) or a subject area, which would be decided by the middle tier (Technical Architecture) team during the project.

2. A namespace itself need not be a formal structural definition like an XML Schema (XSD file) although in general it happens to be so.
3. Since the colon character (:) is mandatory in XML as the delimiter for namespaces, an element or attribute name should never start with a colon although it is technically legal to do so.
4. It is possible to leave namespaces to be left un-prefixed. But only one such “un-prefixed” namespace is allowed within a XML document. Such a namespace is called *default or un-prefixed namespace*. If a default namespace is defined, all unqualified names within the scope of the declaration are presumed to belong to that default. So, if a default namespace in the root element is declared, it is treated as the default namespace for the whole document, and can only be overridden by a more specific namespace declared within the document. Ministry ADE process does not support the default or un-prefixed namespace.
5. W3C has reserved the namespace with local name “xml” for adding new elements or attributes to standards. Developers cannot use “xml” as a local name for their own namespaces.
6. W3C has also reserved a few attributes within this “xml” namespace. Developers cannot use these attribute names for their own namespaces. These attributes are “xml:lang”, “xml:space” (with values “preserve” or “default”).
7. Local names (alias or prefix) for all custom defined namespaces should be completely in lower cases immediately followed by the letter “NS” in upper case (stands for *Name Space*). Please use meaningful local names. There should not be any delimiters (such as space, hyphen, underscore) between multiple words of the local name. Examples : studentnameNS, schooldistrictnameNS.

Revision Log

Date	Version	Change Reference	Author	Reviewed by
2007-JUN-02	1.0	Original Publication	Information Management Group	Ministry Architecture Committee
2008-APR-04	1.0	On page 6, item 1 changed http://xmlns.educ.gov.bc.ca/ to http://www.xmlns.educ.gov.bc.ca/	Peter Krismer	Peter Krismer Mark Reder Ram Tadeparti