

PROCEDURE 1310.38
Issued: April 29, 2002
Effective Date: May 14, 2002

SUBJECT: Extensible Markup Language (XML) Specifications

APPLICATION: Executive Branch Departments and Sub-units

PURPOSE: This procedure establishes the State of Michigan recommended XML specifications.

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SUMMARY: XML has emerged as the industry data/metadata interchange format of choice. With the proliferation of this technology in government and commercial development activities, it is necessary to provide general development direction for the many XML initiatives currently taking place and being planned within the Operating Units (OU). All State XML development activities will be guided by the specifications and guidelines recommended by the World Wide Web Consortium (W3C).

APPLICABLE FORMS: None.

PROCEDURES

Background: XML is a universal data interchange format developed by the W3C. The W3C (<http://www.w3.org/>) is an independent organization that develops technical specifications to ensure web interoperability. XML is a flexible and nonproprietary set of standards for annotating or "tagging" information so that it can be transmitted over a network such as the Internet and be readily interpreted by disparate computer systems.

XML is increasingly being promoted as the basis for making computerized data much more broadly accessible and usable than has previously been possible.

XML offers several advantages:

- Handles data, data structures, and the description of data (metadata)
- Improves interoperability between systems
- Facilitates efficient data exchanges and economical e-business practices
- Reduces duplication of effort and ambiguity of information
- Reduces data exchange life-cycle costs

This procedure is an adaptation of the draft Federal XML Developer's Guide of December 2001. Several Operating Units are required to comply with federal guidelines, therefore the State will make recommendations on XML development that are consistent with federal direction.

Guidance:

Production applications that employ XML should comply with **W3C Recommendations**. Application development activities must not implement specifications or standards that compete with W3C technical work. Applications that implement W3C technical reports at other stages of the development process, or non-W3C specifications, must do so with the following restrictions:

A. Production Applications

Operational Units (OU) may choose to implement W3C technical reports with a **Proposed Recommendation** status provided they are committed to immediately update software when the report reaches final status.

Prior to creating, incorporating or using software that implements non-W3C specifications, developers or integrators must:

- Ensure that no competing W3C endorsed recommendation exists or is being developed.
- Ensure that the specification is a product of a credible, recognized consortium or organization such as the Organization for the Advancement of Structured Information Standards (OASIS), the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), the OMG, OAG, UDDI, RossettaNet, or BizTalk.org.

B. Pilot Applications

Developers of pilot applications (as a precursor to production) may also implement software that conforms to W3C technical reports with a **Candidate Recommendation** status.

C. (Advanced Concept) Demonstrations

Development of demonstration applications (as a proof of concept) may include implementation of software that conforms to W3C technical reports with a **Working Draft** status.

- Exception: development that conforms to the Simple Object Access Protocol (SOAP) 1.1 W3C. Note: must be updated to the SOAP 1.2 specification when it reaches Final Recommendation status.

D. Additional Guidance

All component software (XML parsers, generators, validators, enabled applications, servers, databases, operating systems), and other software acquired or used by State activities shall be fully compliant with all W3C XML technical reports holding **Recommendation** status when such reports exist.

Definitions:

The W3C "Recommendation track" is the process that W3C follows to build consensus around a Web technology, both within W3C and in the Web community as a whole. W3C turns a technical report into a Recommendation by following this process. For more information on this process, please refer to the W3C (www.w3.org).

Following are the labels recognized by the State that describe increasing levels of maturity and consensus along the W3C Recommendation track:

<i>Working Draft</i>	A technical report on the Recommendation track begins as a Working Draft. A Working Draft is a chartered work item of a Working Group and generally represents work in progress and a commitment by W3C to pursue work in a particular area. The label "Working Draft" does not imply that there is consensus within W3C about the technical report.
<i>Candidate Recommendation</i>	A Candidate Recommendation is believed to meet the relevant requirements of the Working Group's charter and any accompanying requirements documents, and has been published in order to gather implementation experience and feedback. Advancement of a technical report to Candidate Recommendation is an explicit call for implementation experience to those outside of the related Working Groups or the W3C itself.
<i>Proposed Recommendation</i>	A Proposed Recommendation is believed to meet the relevant requirements of the Working Group's charter and any accompanying requirements documents, to represent sufficient implementation experience, and to adequately address dependencies from the W3C technical community and comments from previous reviewers. A Proposed Recommendation is a technical report that the Director has sent to the Advisory Committee for review.
<i>Recommendation</i>	A W3C Recommendation is a technical report that is the end result of extensive consensus-building inside and outside of W3C about a particular technology or policy. W3C considers that the ideas or technology specified by a Recommendation are appropriate for widespread deployment and promote W3C's mission.

MAINTENANCE

DMB: Acquisition Services shall not approve any **XML** acquisition or purchase request without confirmation from the Department of Information Technology, Office of Research and Policy, that such request is in compliance with the standard.

Operating Unit (OU): Any and all projects, consulting requests, equipment and software acquisition requests, or ITB's relating to **XML** will be subject to review for compliance with this standard by the Department of Information Technology.

All existing XML implementations are excluded from this standard. An Operating Unit must migrate to this standard if there is a cause to change from their existing implementation.

DIT: The Office of Strategic Policy will review this standard on a continuing basis and make recommendations for changes. An appropriate group of staff, representing a wide-range of state operating units, will review and possibly revise these standards and guidelines as often as needed.

Exceptions from this standard for reasons other than those outlined above will be made through the exception handling process described in the Exception Process Template.
