

## Preserving State Government Digital Information Minnesota Historical Society

### Comparison Chart of State Use of XML Bill Drafting Systems

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The following chart and summary was created in response to the question of how many states are currently using an XML bill drafting system.

Information about the details of the specific systems is hard to locate, and the chart below should not be taken as authoritative nor comprehensive. Information was found by reviewing news articles and resources such as conference proceedings of the National Association of Legislative Information Technology (NALIT), as well as through online search tools. More information may be gathered by contacting the individuals in charge of the bill drafting systems as listed in the document compiled by Pam Greenberg at the National Conference of State Legislators (NCSL).<sup>1</sup> Special thanks is given to Devan Shepard, CEO/CTO of XMaLpha, for providing details on services provided by XMaLpha to individual states.

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To summarize the information collected in the chart below, twenty states are currently using XML in some manner in their bill drafting or legislative processes. Many of the states have partnered with XMaLpha Technologies, Arbortext, or Propylon to fulfill their needs. In many cases these three companies work together assisting their government clients. “XMaLpha Technologies provides XML solutions, analysis, design, education, integration, quality assurance, and implementation of Legislative Solutions, Web

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<sup>1</sup> Greenberg, Pam. *States with XML-Based Legislative Systems*. National Conference of State Legislators Denver Office. October 2005 with partial updates in 2006, 2007, and 2008.

Services, and Enterprise XML applications”<sup>2</sup> including XMaLpha Legislative Solutions, XMaLpha's primary practice group, which is exclusively focused on the delivery of solutions to State Legislatures. XMaLpha Technologies partners with States to analyze requirements, design solutions, develop, select, implement, train, and provide quality assurance for bill drafting, chamber automation, and related legislative solutions. “Arbortext is a content publishing system that streamlines and automates your information publishing process and eliminates costly inefficiencies [by using XML].”<sup>3</sup> “Propylon is a leading global vendor of legislative software; [whose] products provide bill drafting, chamber process management, collaboration, workflow improvement and publishing to legislative bodies and regulatory agencies.”<sup>4</sup>

The following partnerships have been created between vendors and the states listed below:

**XMaLpha:** Legislative Solution Clients include Idaho, Iowa, Kansas, Minnesota, Nebraska, and Oregon. XMaLpha also has partnerships and training/consulting relationships with the states of California, Florida, Georgia, New York, and Texas.

**Arbortext:** Alabama<sup>5</sup>, Florida, Maine, Nebraska, North Dakota<sup>6</sup>, Oklahoma<sup>7</sup>, and Texas.

**Propylon:** Kansas, Oregon, and Pennsylvania.

State	XML Product	Source and Date	Notes
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<sup>2</sup> <http://xmalpha.com/>

<sup>3</sup> Arbortext was acquired by PTC (Parametric Technology Corporation) in 2005. <http://www.ptc.com/products/arbortext/>

<sup>4</sup> <http://www.propylon.com/>

<sup>5</sup> In 2006 Alabama was using Arbortext, but Alabama is not currently listed on Arbortext’s website as a client. It is unknown if Alabama is still using Arbortext.

<sup>6</sup> North Dakota planned on replacing the state’s legislative applications including the bill drafting system in June 2007.

(<http://www.nd.gov/epm/oversight/doc/proj-startup/leg-phase2-startup.pdf>) In November 2008, reports came out that the project was unsuccessful due to irresolvable differences between the state and contracted company. (<http://www.bismarcktribune.com/articles/2008/10/07/news/state/166212.txt>)

<sup>7</sup> In 2006 Oklahoma was using Arbortext, but Oklahoma is not currently listed on Arbortext’s website as a client. It is unknown if Oklahoma is still using Arbortext.

<b>Alabama</b>	Arbortext	<a href="http://www.fcw.com/online/news/95524-1.html">http://www.fcw.com/online/news/95524-1.html</a> [2006] (Link worked December 2008, broken January 2009.)	An article in Federal Computer Weekly referenced that Alabama and Arbortext were working together in 2006. As of December 2008, Alabama is not listed on the Arbortext website as being a client of theirs.
Alaska	<i>no data</i>		
<b>Arizona</b>		<a href="http://www.ncsl.org/programs/lis/NALIT/statedemo00.htm#az-webtrack">http://www.ncsl.org/programs/lis/NALIT/statedemo00.htm#az-webtrack</a> [2000]	Not part of the bill drafting system, but Arizona uses a web-based bill-tracking system that allows anyone to track bills in the legislature. It is called the ALIS Tracker program and can be found at <a href="http://www.azleg.state.az.us">www.azleg.state.az.us</a> . It is unknown if the technology behind the program is XML based.
Arkansas	<i>no data</i>		

<b>California</b>	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2001 - 2009]	XMaLpha Technologies has provided XML, Java, .NET, requirements gathering training, and general consulting to a variety of agencies in the State of California. XML Training has also been provided to several municipal agencies by XMaLpha.
	XML Bill Drafting System	<a href="http://www.ncsl.org/slides/nalit/XMLinCA_jpg_files/frame.htm">http://www.ncsl.org/slides/nalit/XMLinCA_jpg_files/frame.htm</a> [2004]	The Legislative Council of California gave a presentation at NALIT in 2004 that discussed their bill drafting system and the process they went through to change it, highlighting the improvements in business practices.
Colorado	<i>no data</i>		
<b>Connecticut</b>		<a href="http://www.theopenhouseproject.com/the-open-house-project-report/3-legislation-database/">http://www.theopenhouseproject.com/the-open-house-project-report/3-legislation-database/</a> [2007]	Connecticut publishes its legislative data in a structured data format. (Details are not provided, but XML is discussed in the article.)
Delaware	<i>no data</i>		

<b>Florida</b>	Arbortext	NCSL document: <i>States with XML Based Legislative Systems</i> . See footnote #7. [no date]	Florida Senate
	Leagis	<a href="http://www.openxmlcommunity.org/documents/casestudies/Florida_House_of_Rep_OpenXML.pdf">http://www.openxmlcommunity.org/documents/casestudies/Florida_House_of_Rep_OpenXML.pdf</a> [2006]	Florida House of Representatives is using Leagis and Microsoft Word 2007 XML products together.
	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2005, 2006]	The Florida House of Representatives is listed as a client of XMaLpha. XMaLpha provided general XML consulting, and an overview of XML Legislative options, as part of a solutions review project with the House. XMaLpha has provided training to other agencies in the state.
<b>Georgia</b>	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2003]	XMaLpha Technologies has provided XML training, Java training, and consulting to a variety of agencies throughout the State of Georgia.
<b>Hawaii</b>	<i>no data</i>		

<b>Idaho</b>	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2004 - 2005]	Idaho is listed as a Legislative Solutions™ client of XMaLpha. XMaLpha assisted with the development of the Legislative prototype system in Idaho. This system was a "proof-of-concept" designed to validate the use of XML to encode legislative bills. A suite of complex bills with known rendering and publication challenges was used to test the successful prototype. This lead to further in-house development by the Idaho team.
	GEMS	<a href="http://www.ncsl.org/print/nalit/5min-ID.pdf">http://www.ncsl.org/print/nalit/5min-ID.pdf</a> [2007] and NCSL document: <i>States with XML Based Legislative Systems</i> . See footnote #7. [no date]	The GEMS Application is a customized Java front end product that includes XML, Arbortext, bill tracking and drafting, web updates, and GEMS functions and technology. Specific information was not found on GEMS itself. [It is unknown what GEMS stands for, if anything.]
<b>Illinois</b>	XML editor	<a href="http://www.ncsl.org/print/nalit/summer04.pdf">http://www.ncsl.org/print/nalit/summer04.pdf</a> (pg 4)	Corel XMetaL 3 is used for the XML

	and XMetaL; Microsoft Word	[2004]  and  <a href="http://www.ncsl.org/slides/nalit/ILXMLWhy_jpg_jpg_files/frame.htm">http://www.ncsl.org/slides/nalit/ILXMLWhy_jpg_jpg_files/frame.htm</a> [2006]	document markup. Applications include bill drafting, tracking, daily calendars, and web updates. Appropriations are drafted using XML in Microsoft Word 2003 due to conflicts with XMetaL software. Goals in 2006 were to create a digital calendar and XML files for the voting system. (XMetaL is an XML-based authoring and content collaboration software)
Indiana	<i>no data</i>		
<b>Iowa</b>	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2006]	Iowa is listed as a Legislative Solutions™ client of XMaLpha. XMaLpha provided consulting and programming personnel to the Legislature during an initial stage of requirements gathering and development of an XML administrative code application.
	Administrative Code in XML	NCSL document: <i>States with XML Based Legislative Systems</i> . See footnote #7. [2008]	Administrative code is in XML. In 2008 starting to look at XML bill

			drafting applications.
<b>Kansas</b>	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2005]	Kansas is listed as a Legislative Solutions™ client of XMaLpha. XMaLpha developed the requirements for the legislative law making, chamber automation, and legislative research applications. XMaLpha also conducted a software vendor evaluation for the Kansas Legislature in support of the KLISS.
	Propylon	<a href="http://www.propylon.com/clients">http://www.propylon.com/clients</a> [2007]	Used in 2006 to assist with long-term strategic technology plan and in 2007 to design and implement Legislative Workbench.
	KLISS	NCSL document: <i>States with XML Based Legislative Systems</i> . See footnote #7. [pre 2008]	Information and summary from the NCSL document. KLISS is the Kansas Legislative Information Services System. Uses open source technology to integrate 15 applications including bill drafting. Selected to use Propylon, completed a gap analysis, designing a product, and will soon test and implement program.

Kentucky	<i>no data</i>		
Louisiana	<i>no data</i>		
<b>Maine</b>	XML text editor and Microsoft Word 2003	<a href="http://www.ncsl.org/programs/lis/NALIT/WinterSpring07.htm">http://www.ncsl.org/programs/lis/NALIT/WinterSpring07.htm</a> [2007]	Under Planning for Vista and Office 2007... it reads “the Maine Bill Drafting application converts from an XML text editor to Microsoft Word 2003 documents”.
	Arbortext	NCSL document: <i>States with XML Based Legislative Systems</i> . See footnote #7. [2007]	Arbortext is listed in the NCSL document: <i>States with XML Based Legislative Systems</i> .
<b>Maryland</b>	XML and Microsoft Word	<a href="http://www.ncsl.org/programs/lis/NALIT/summer07.htm#Maryland">http://www.ncsl.org/programs/lis/NALIT/summer07.htm#Maryland</a> [2007] and <a href="http://www.ncsl.org/slides/nalit/MDXMLWhy_jpg_jpg_files/frame.htm">http://www.ncsl.org/slides/nalit/MDXMLWhy_jpg_jpg_files/frame.htm</a> [2006]	The bill drafting system in Maryland “uses XML for all phases of the bill draft except the actual document which is kept in Microsoft Word format. That is, we convert the existing statute (XML database) to Microsoft Word and allow the drafters to operate in a strictly word processor-based environment.”

			Maryland had previously used a strictly XML-based system which was not adequate for their purposes.
Massachusetts	<i>no data</i>		
<b>Michigan</b>	XML	NCSL document: <i>States with XML Based Legislative Systems</i> . See footnote #7. [2005]  and  <a href="http://www.xml.com/pub/a/2001/05/09/legalxml.html">http://www.xml.com/pub/a/2001/05/09/legalxml.html</a> [2001]	“In January 2005 the Michigan Legislative Service Bureau implemented an in-house bill drafting / statutes compilation project involving XML. It was a two year project and was well-received. It's a web-based system that opens in a browser for drafting, status, statute search, and statute updates. They've put the Michigan Compiled Laws (MCL) into an XML database and have a custom search engine built against that database. This is the only part that's currently using XML. For bill drafting, the drafters use Microsoft Word. They search the MCL, and then import the relevant section into Microsoft Word. They use Microsoft Word to complete

			the formatting of the bill draft. Now that Microsoft has announced that the next release of Microsoft Word will support XML, they will look at further development.”
<b>Minnesota</b>	XTEND	<a href="http://www.ncsl.org/print/nalit/XMLinMN.pdf">http://www.ncsl.org/print/nalit/XMLinMN.pdf</a> [2004]	XTEND is the XML Text Editor New Development project that uses XML as a common language between different types of documents providing flexibility with the data produced.
	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2003]	Minnesota is listed as a Legislative Solutions™ client of XMaLpha. XMaLpha partnered with the State of Minnesota, providing, design, schema development, programming, consulting services, and personnel during the development of the XTEND product.
<b>Mississippi</b>	none		Mississippi is not using XML in their bill drafting system; they are however

			using XML on some static pages. <sup>8</sup>
Missouri	<i>no data</i>		
Montana	<i>no data</i>		
<b>Nebraska</b>	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2008]	Nebraska is listed as a Legislative Solutions™ client of XMaLpha. XMaLpha provides consulting support to the Nebraska Legislature, including the enhancement of legislative print composition, PDF generation from XML files, and other publishing.
	Arbortext	NCSL document: <i>States with XML Based Legislative Systems</i> . See footnote #7. [2008]	
Nevada	<i>no data</i>		

<sup>8</sup> Rob Patterson, Director of Data Processing. Mississippi Legislative Budget Office. Basecamp correspondence January 26, 2009.

New Hampshire	<i>no data</i>		
Nevada	<i>no data</i>		
New Jersey	<i>no data</i>		
New Mexico	<i>no data</i>		
<b>New York</b>	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2003-2009]	XMaLpha Technologies has provided XML, Java, .NET, requirements gathering, and business information technologies training and consulting to a variety of agencies in the State of New York.
North Carolina	<i>no data</i>		
<b>North Dakota</b>	Arbortext	<a href="http://www.nd.gov/epm/oversight/doc/proj-startup/leg-phase2-startup.pdf">http://www.nd.gov/epm/oversight/doc/proj-startup/leg-phase2-startup.pdf</a> [pre 2007]	North Dakota planned on replacing the state's legislative applications,

		and <a href="http://www.bismarcktribune.com/articles/2008/10/07/news/state/166212.txt">http://www.bismarcktribune.com/articles/2008/10/07/news/state/166212.txt</a> [2008]	including the bill drafting system, in June 2007. In November 2008, reports came out that the project was unsuccessful due to irresolvable differences between the state and contracted company. [Reports refer to the contracted company as Arbortext and their parent company PTC – Parametric Technology Corporation.]
	XML	<a href="http://www.ncsl.org/print/nalit/5min-ND.pdf">http://www.ncsl.org/print/nalit/5min-ND.pdf</a> [2007]	Developing an XML authoring and publishing environment.
<b>Ohio</b>	XML	<a href="http://www.ncsl.org/programs/lis/nalit/statedemo00.htm#OH">http://www.ncsl.org/programs/lis/nalit/statedemo00.htm#OH</a> [2000]	Documents are created by using well-defined XML tag structures. Style sheets manipulate the data and display the data in multiple ways for various uses.
<b>Oklahoma</b>	Arbortext	<a href="http://fcw.com/online/news/95524-1.html">http://fcw.com/online/news/95524-1.html</a> [2006] (Link worked December 2008, broken January 2009.)	This article listed Oklahoma as a client of Arbortext; however, Arbortext does not list Oklahoma on its list of clients.

<b>Oregon</b>	XMaLpha and Propylon	<a href="http://xmalpha.com/PDF/XMaLpha_OR_Press_Release.pdf">http://xmalpha.com/PDF/XMaLpha_OR_Press_Release.pdf</a> [no date]; and <a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2005]; and <a href="http://www.propylon.com/clients">http://www.propylon.com/clients</a> [2006]	Oregon is listed as a Legislative Solutions™ client of XMaLpha. More details are provided in the press release including how XMaLpha has assisted with designing a new bill drafting system. XMaLpha developed the requirements for the bill drafting application. XMaLpha Technologies now provides Quality Assurance and support to the internal project management office for the system being developed by Propylon.
<b>Pennsylvania</b>	Propylon	<a href="http://www.propylon.com/clients">http://www.propylon.com/clients</a> [no date]	The Pennsylvania General Assembly is listed as a client of Propylon, which is working on implementing the Legislative Workbench bill drafting software in Pennsylvania.
Rhode Island	<i>no data on bill drafting systems</i>		XML is not being used in bill drafting, however REX: Rhode Island e-Government Exchange program is using XML as a data sharing technique. <a href="http://www.ri.gov/rex/">http://www.ri.gov/rex/</a>

South Carolina	<i>no data</i>		
Tennessee	<i>no data</i>		
<b>Texas</b>	XMaLpha	<a href="http://xmalpha.com/clients.htm">http://xmalpha.com/clients.htm</a> [2003 - 2009]	XMaLpha Technologies has provided training in XML, Java, .NET, and a number of other technologies, as well as consulting to a variety of agencies in the State of Texas. Training has also been provided to several municipal agencies in Texas.
	SALSA; including Epic Editor from Arbortext	<a href="http://www.ncsl.org/programs/lis/cip/sullivan.pdf">http://www.ncsl.org/programs/lis/cip/sullivan.pdf</a> [2002]	The Texas Legislative Council uses the SALSA system. [It is unknown what SALSA stands for, if anything.] The PDF explains the system architecture which is based on three components – client, middle tier and database. XML is used and manipulated within the system. SALSA uses Epic Editor which is from Arbortext.

Utah	<i>no data</i>		
Vermont	<i>no data</i>		
<b>Virginia</b>		<a href="http://www.theopenhouseproject.com/the-open-house-project-report/3-legislation-database/">http://www.theopenhouseproject.com/the-open-house-project-report/3-legislation-database/</a> [2007]	Virginia publishes its legislative data in a structured data format. (Details are not provided, but XML is discussed in the article.)
<b>Washington</b>	XML	<a href="http://www.ncsl.org/programs/lis/nalit/Summer06.htm#Washington">http://www.ncsl.org/programs/lis/nalit/Summer06.htm#Washington</a> [2006]	In an article on their new bill drafting system it is stated that documents and the document process would be moving from Word Perfect to XML files.
West Virginia	<i>no data</i>		
Wisconsin	<i>no data</i>		
Wyoming	<i>no data</i>		

<b>US Senate</b> and <b>US House of Representatives</b>	XML	<a href="http://www.theopenhouseproject.com/the-open-house-project-report/3-legislation-database/">http://www.theopenhouseproject.com/the-open-house-project-report/3-legislation-database/</a> [2007] and <a href="http://xml.house.gov/drafting.htm">http://xml.house.gov/drafting.htm</a> [no date]	“House and Senate have been drafting legislation using XML for the last several years, a use of structured data that has improved the internal bill drafting work flow.”