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## The Power Of Choice: Massachusetts Wisely Embraces Multiple Document Format Standards To Drive Greater Competition And Innovation

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A “document format” (also known as a “file format”) is a particular way to encode information for storage in a computer file.<sup>1</sup> Numerous document formats exist for encoding and storing the same type of information in word processing, spreadsheet, presentation, and other document types. Such document formats can complement each other by offering different functionality, compete with one another when there is functionality overlap, or both. For example, the latest version of WordPerfect reportedly supports more than 60 document formats. For these reasons and those discussed below, consumers and governments benefit from the existence of multiple document formats. Yet, within the last few years, based primarily on increasing efforts by governments to adopt electronic document initiatives, and the corresponding lobbying efforts of numerous vendors trying to gain a competitive advantage by promoting their preferred standards/products, a highly charged debate has arisen regarding the wisdom of governments to select particular document formats to the exclusion of others. Nowhere has this debate been followed and scrutinized more

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closely than in Massachusetts.

From the moment certain Massachusetts government IT officials set in motion a plan to mandate the use of the OpenDocument Format (“ODF”) as the default format for government documents, to the exclusion of other formats, the thorough and very public vetting of the goals, potential impact, and resolution of the plan has caused many to question the appropriate role that government should play in selecting and/or excluding technology solutions (standards-based or otherwise), and on what basis. Fortunately for Massachusetts and its citizens, the goals of technical neutrality, choice, and inclusiveness prevailed, and other document formats were permitted. The timeline of key events in this Massachusetts debate is as follows:

- On January 13, 2004, marking a dramatic shift in policy, the Information Technology Division (“ITD”) of the Massachusetts Office for Administration and Finance released its Enterprise Open Standards Policy requiring, *inter alia*, that all prospective IT investment must comply with the open standards referenced in the ITD’s Enterprise Technology Enterprise Model (“ETRM”) (a statewide IT framework for 80,000 end-users in the executive branch), and that all government agencies “integrate open standards compliance language in all IT bids and solicitations.”<sup>2</sup>

- In September, 2005, following more than a year and a half of contentious debate over the new open standards policy and the related document format issues, the ITD released version 3.5 of its ETRM,<sup>3</sup> which set forth the acceptable document formats in which data could be presented and captured by government agencies. This version of the ETRM effectively permitted the use of *only* ODF for government word processing documents and excluded Microsoft’s XML-based document formats (“Open XML”).

- In June, 2006, the Massachusetts Senate Committee on Post Audit and Oversight

issued a report entitled “Open Standards, Closed Government: ITD’s Deliberate Disregard for Public Process,” in which it sharply criticized the ITD for: (1) releasing the ETRM despite public testimony that ODF may impair IT accessibility for thousands of workers with disabilities; (2) failing to conduct a cost analysis or develop implementation documents prior to issuing the ETRM; and (3) issuing provisions in the ETRM relating to public records management without the requisite statutory authority.<sup>4</sup> These shortcomings were later detailed in a comprehensive report by the Auditor of the Commonwealth.<sup>5</sup>

- In August 2007, following public comment, the ITD added Open XML to the list of approved standards in version 4 of the ETRM, defeating calls for an exclusive ODF mandate by IBM, Sun Microsystems, and others.<sup>6</sup> Massachusetts officials explained in a statement that concerns about competing document standards were “outweighed substantially by the benefits of moving toward open, XML-based document format standards. ... The ETRM articulates a vision of a service-oriented architecture where information can be shared, reused and repurposed based on XML technologies. ... The availability of open, standardized XML document formats without vendor bias will move us further along in realizing this vision.”<sup>7</sup>

Some commentators have characterized Massachusetts’ decision to broaden the scope of permissible document formats to include Open XML as a failure.<sup>8</sup> Others, however, believe (consistent with our view) that, as the consideration of the document format issues in Massachusetts became more transparent and democratic, government officials ultimately arrived at a more rational conclusion that permits multiple, interoperable standards to serve the unique needs of various users, which will lead to much greater choice, competition, and innovation.

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## Governments Should Strive For Technical Neutrality And Choice

Because governments use data and documents in a number of different ways and, in fact, often have to deal with ensuring backward compatibility with existing legacy systems, the best public policy approach is one that allows government agencies to *choose* the document formats that best serve their various needs. A policy of choice encourages companies to vigorously compete for the government's purchase decision, which, in turn, fosters greater innovation, increased customer choice, and lower costs. It also allows governments and customers to avoid becoming beholden to one technology, one standard, one company, and would alleviate any concerns over perceived proprietary control by allowing governments to turn to other formats were an individual company to attempt to circumvent the openness of a standard through referenced proprietary specifications or future modifications to the standard. This is particularly so with Open XML and ODF, which serve different user needs.<sup>9</sup> Indeed, a recent independent report on document formats by the Burton Group underscores the rationale for multiple standards and choice, concluding that ODF and Open XML were developed out of different design considerations and priorities and therefore should *both* be embraced by industry and governments.<sup>10</sup>

On the other hand, government preferences or mandates for particular technical standards or technologies arbitrarily force product uniformity and vendor lock-in, discourage R&D investment, dampen competition and innovation, and prevent governments from securing the best technical solution available. According to a recent IBM/Oracle-sponsored report on e-government interoperability, "Mandating a particular technology will not only prevent government from using the latest and the best but also consign it to using older and perhaps outmoded standards."<sup>11</sup> Further, a recent report on interoperability and innovation by the prestigious Harvard Berkman Center concludes: "[T]he government-mandated approach is likely to perform poorly. ... Not only are governments generally ill-equipped to choose the most suitable standard, but also tend to operate under conditions that make it difficult to respond in due time to market developments or changes in technology."<sup>12</sup> Preferential policies may also be *per se* illegal. As court decisions in Brazil, Belgium, and elsewhere demonstrate, preferences in software procurement policies contravene well-established requirements and principles of equal protection and nondiscrimination set out in federal or state law, constitutional provisions, and major EU Directives.<sup>13</sup>

## Interoperability And Innovation Thrive In Multiple Document Format Environments

In the domain of document formats, there has *always* existed a plethora of overlapping

standards – such as HTML, TXT, DOC, PDF, WP, RTF, UOF, ODA, Compound Document Format, DocBook, and DSSSL – and yet the prior existence of these overlapping standards has never been a barrier to interoperability or to the introduction or evolution of newer, innovative document format standards.<sup>14</sup> Indeed, had the view of "only one document format standard" prevailed, ODF could never have become an ISO standard in the first place, and ISO would not have accepted Open XML from Ecma as a candidate for additional standardization.

Nor does the endorsement of multiple document format standards signal a likely reduction in interoperability. With respect to software in general, and document formats in particular, translators and other means are equally viable to ensure interoperability and preclude the need to mandate one particular solution. Notably, the freely available ODF-Open XML Translator, sponsored by Microsoft to facilitate interoperability between ODF and Open XML, has more than 385,000 downloads and has become one of the 25 most active projects on SourceForge.net, which hosts more than 100,000 open source projects.<sup>15</sup> Based on this and other industry efforts, Open XML and ODF can coexist *even within the same software application*, so that documents can be formatted and stored using either Open XML or ODF.<sup>16</sup> The Burton Group concluded that the extensive document format translators that have already sprung up, combined with the fact that criticisms of Open XML are rooted in political "FUD" (fear, uncertainty, and doubt) rather than in fact, further supports the adoption of both standards by governments and industry.<sup>17</sup>

## Massachusetts Should Be Lauded For Charting A Sensible Path Forward

Notwithstanding some of the criticisms it has faced from certain commentators, Massachusetts' willingness to change its document format policy course mid-way to embrace Open XML based on marketplace developments and user needs should be praised and should serve as an example to other governments faced with similar situations. Fortunately, it has already begun to do so. In 2007 alone, no less than six U.S. states (e.g., California, Connecticut, Florida, Minnesota, Oregon, and Texas) and many countries around the world — including Denmark, Italy, Malaysia, Sweden, and Switzerland — have rejected document format mandates and wisely embraced a policy of choice and technical neutrality as the best path forward.

Nor should ODF proponents view Massachusetts' decision to embrace multiple document formats as a setback or defeat. As a Yankee Group research fellow, Laura DiDio, observed: "In fact, it gives them the opportunity to shine. They've been saying all along that they're better than Microsoft, and now they get the chance to prove it."<sup>18</sup>

<sup>1</sup> See, e.g., [http://en.wikipedia.org/wiki/File\\_format](http://en.wikipedia.org/wiki/File_format).

<sup>2</sup> Enterprise Open Standards Policy (effective Jan. 13, 2004), [www.mass.gov/Aitd/docs/policies\\_standards/opestandards.pdf](http://www.mass.gov/Aitd/docs/policies_standards/opestandards.pdf).

<sup>3</sup> Enterprise Technical Reference Model - Version 3.5 (effective Sept. 21, 2005), [www.mass.gov/Aitd/docs/policies\\_standards/etrm3dot5/etrmv3dot5intro.pdf](http://www.mass.gov/Aitd/docs/policies_standards/etrm3dot5/etrmv3dot5intro.pdf).

<sup>4</sup> A Report of the Senate Committee on Post Audit and Oversight, Open Standards, Closed Government (June 2006), <http://mass.gov/legis/bills/senate/st02/st02612.htm>.

<sup>5</sup> Report on the Examination of the Information Technology Division's Policy for Implementing the Open Document Standard, No. 2006-0884-4T (Sept. 20, 2007), [www.mass.gov/sao/200608844t.doc](http://www.mass.gov/sao/200608844t.doc).

<sup>6</sup> Enterprise Technical Reference Model; Service-Oriented Architecture (ETRM v4.0), [www.mass.gov/?pageID=itdsubtopic&L=4&LO=Home&L1=Policies%2c+Standards%26+Guidance&L2=Enterprise+Architecture&L3=Enterprise+Technical+Reference+Model+Service-Oriented+Architecture+\(ETRM+v4.0\)&sid=Aitd](http://www.mass.gov/?pageID=itdsubtopic&L=4&LO=Home&L1=Policies%2c+Standards%26+Guidance&L2=Enterprise+Architecture&L3=Enterprise+Technical+Reference+Model+Service-Oriented+Architecture+(ETRM+v4.0)&sid=Aitd).

<sup>7</sup> Statement on ETRM v4.0 Public Review Comments (Aug. 1, 2007), [www.mass.gov/?pageID=itdterminal&L=4&LO=Home&L1=Policies%2c+Standards%26+Guidance&L2=Enterprise+Architecture&L3=ETRM+v4.0+Public+Comments+Information&sid=Aitd&b=terminalcontent&f=policies\\_standards\\_etrmv4\\_etrmv4dot0statement&csid=Aitd](http://www.mass.gov/?pageID=itdterminal&L=4&LO=Home&L1=Policies%2c+Standards%26+Guidance&L2=Enterprise+Architecture&L3=ETRM+v4.0+Public+Comments+Information&sid=Aitd&b=terminalcontent&f=policies_standards_etrmv4_etrmv4dot0statement&csid=Aitd).

<sup>8</sup> See Andrew Updegrave, Massachusetts Falls to OOXML as ITD Punt (Aug. 1, 2007), <http://www.consortiuminfo.org/standardsblog/article.php?story=20070801182558375>; Rajiv S. Shah, Jay P. Kesan & Andrew C. Kennis, Lessons for Open Standard Policies: A Case Study of the Massachusetts Experience, III. Pub. L. Research Paper No. 07-13 (ICEGOV Dec. 10-13, 2007), [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1028133](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1028133).

<sup>9</sup> Open XML's primary design goal was to be backward compatible with the content and functionality in billions of existing documents and to carry them forward into an open environment. By contrast, ODF is more narrowly focused on reflecting the information created by a single application (OpenOffice) and thus has more limited functionality suitable for simpler applications. Open XML also includes advanced functions (e.g., robust financial formulas for spreadsheets) that are not currently supported by ODF. See Ecma International, Response Document for National Body Comments from 30-Day Review of the Fast Track Ballot for ISO/IEC DIS 29500 (ECMA-376), pp. 2-8 (Feb. 28, 2007), available at [www.ecma-international.org/news/TC45\\_current\\_work/Ecma%20responses.pdf](http://www.ecma-international.org/news/TC45_current_work/Ecma%20responses.pdf).

<sup>10</sup> "What's Up, .DOC? ODF, OOXML, and the Revolutionary Implications of XML in Productivity Applications" (Jan. 11, 2008), [www.burtongroup.com/Guest/Ccs/WhatsUpDoc.aspx](http://www.burtongroup.com/Guest/Ccs/WhatsUpDoc.aspx) ("Burton Group Report").

<sup>11</sup> See Report on Government Interoperability Frameworks for Asia-Pacific Countries, <http://www.apdip.net/projects/gif/GIF-Guide.pdf>.

<sup>12</sup> Glasser, U. & Palfrey, J., Breaking Down Digital Barriers: When and How ICT Interoperability Drives Innovation, Harvard Berkman Center (Nov. 2007), p. 25, <http://cyber.law.harvard.edu/interop/>.

<sup>13</sup> See Sieverding, M., Choice in Government Software Procurement: A Winning Strategy, *Public Procurement Law Review* (Issue 6, 2006), at p. 338 et seq.

<sup>14</sup> Further, there are many other examples in the IT marketplace where competing standards coexist and promote competition and innovation because they serve distinct user requirements — notably, digital image formats (e.g., JPEG, PNG, CGM); digital media formats (e.g., MPEG-1, MPEG-2, MPEG-4, H.264); digital interface standards (e.g., DVI, FireWire; HDMI, SDI, UDI, USB); digital TV formats (e.g., 1080i, 720p, 1080p); and e-mail formats (e.g., x.400, SMTP, POP3, IMAP).

<sup>15</sup> See, e.g., SourceForge, Inc., Open XML/ODF Translator Add-in for Office, at <http://source-forge.net/projects/odf-converter>.

<sup>16</sup> For example, Novell's OpenOffice already supports both ODF and Open XML and Corel recently released a beta version of WordPerfect that supports both formats.

<sup>17</sup> See Burton Group Report at 16 and 22.

<sup>18</sup> See Long, M., Massachusetts Embraces Microsoft's Open XML (Aug. 2, 2007) [www.newsfactor.com/news/Massachusetts-Embraces-Open-XML/story.xhtml?story\\_id=0220002KEDPU](http://www.newsfactor.com/news/Massachusetts-Embraces-Open-XML/story.xhtml?story_id=0220002KEDPU).