

Open Document Format and the Massachusetts Open Standards Initiative

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Commonwealth of Massachusetts

- Roughly 6.5 million people
- Progressive e-government environment
- Award winning e-gov portal, Mass.gov
- Only state to fund IT infrastructure using capital funds
- Dynamic information technology private sector one of our engines of growth
- Increasing dependence of our economy on intellectual property
- Strongly support IP rights of citizens and businesses
- State and municipal government combined spend roughly half a billion dollars annually on information technology
- State budget roughly 23 billion annually

How the Commonwealth Adopted Open Document Format

- ◆ ITD and its legal authority
- ◆ The state of the Commonwealth's technology environment in 2003
- ◆ The IT Commission and its recommendations
- ◆ Adoption of Open Standards Policy, IT Acquisition Policy, and ETRM
- ◆ Non-open document formats
- ◆ Negotiations with MS
- ◆ ETRM V. 3
- ◆ Public Comment on ETRM V. 3
- ◆ Draft ETRM v. 3.5, public comment
- ◆ Final ETRM v. 3.5: what it says, what are our challenges?

ITD

What it is; legal authority

ITD and Its Legal Authority

- ◆ Authority to set information technology standards within the Executive Department. Mass. Gen. L. ch. 7, sec. 4(d)
- ◆ Authority to determine “whether, the extent to which and the manner by which each executive department agency shall create, maintain and preserve electronic records, signatures and contracts”
- ◆ ITD also runs a massive data center hosting state agencies’ critical apps; state network, MAGNet; and several enterprise applications.

Commonwealth's Information Technology Environment in 2003

- ◆ 173 Executive Department agencies within a very heterogeneous IT environment ("if someone made one and someone sold one, we bought it")
- ◆ Massive legacy systems and siloed applications creating data interoperability issues and less than optimal customer service
- ◆ Traditional government organizational structure that did not foster collaboration across agencies and their budgets
- ◆ Government information being stored in proprietary formats that jeopardize their long term accessibility and posed potential conflicts with state sovereignty.

The IT Commission and Its Recommendations

- ◆ Information Technology Commission created through ch. 142, Acts of 2002
- ◆ IT Commission comprised of representatives of all branches of state government, academia and industry
- ◆ Its charge: recommend an enterprise-wide strategy, including all 3 branches of government and the constitutional offices, for the commonwealth's information technology infrastructure, system development and governance."
- ◆ Its report: Adopt an architecture including IT standards; ensure that IT Projects conform with those standards to promote greater integration and interoperability of information technology across the enterprise.
- ◆ Thereafter, advisory Board created by Section 390 of Chapter 149 of the Act of 2004. Purely an advisory board. ITD is a member.

Adoption of Open Standards Policy, IT Acquisition Policy, and ETRM

- ◆ New IT standards announced January 12, 2004 after public comment period
- ◆ Three related documents:
 - Open Standards policy
 - IT Acquisition policy
 - Enterprise Technical Reference Model (ETRM)
- ◆ Intent: Require adherence to open standards
 - Require consideration of all possible solutions (proprietary, open source, public sector code sharing) when making best value evaluations. Open source IS NOT REQUIRED
 - Clarify distinctions between open standards and open source

The Path to “Open”

- ◆ The Open Standards Initiative
 - Open standards, open code, open source and the Commonwealth IT Acquisition policy
- ◆ Building internal capacity
- ◆ Working with vendors to evolve traditional software development practices
- ◆ The Government Open Code Collaborative

Enterprise Open Standards Policy

- ◆ All future IT procurement must be open standards wherever possible.
- ◆ Open Standards definition:
 - Specifications for systems that are publicly available and are developed by an open community and affirmed by a standards body. Hypertext Markup Language (HTML) is an example of an open standard. Open standards imply that multiple vendors can compete directly based on the features and performance of their products. It also implies that the existing information technology solution is portable and that it can be removed and replaced with that of another vendor with minimal effort and without major interruption

Enterprise IT Acquisition Policy

- ◆ IT solutions must be selected based on best value after consideration of all possible solutions:
 - Proprietary
 - Public Sector Code Sharing
 - Open Source

Enterprise Technical Reference Model (ETRM)

- ◆ Provides framework to identify standards, specifications and technologies that support the Commonwealth's computing environment
- ◆ Goal is to build and support a Service Oriented Architecture
- ◆ Identifies required open standards in six Domains
- ◆ Version 3.5 finalized and published on September 21, 2005 on ITD's web site at www.mass.gov/itd

Evolution of treatment of doc formats in ETRM

- ◆ Version 2.0, RTF, TXT, HTM, PDF and XML treated as acceptable document formats
- ◆ Draft Version 3.0, SOA, XML specifications and associated standards (xml schema, etc.). For document formats, MS Office 2003 XML schema for office documents; Oasis ODF. Open formats defined to include de facto formats
- ◆ Public review; dropped document format section pending review
- ◆ Version 3.5 redefines open format; de facto formats excluded. Open formats plus "other acceptable formats". Open formats includes txt, htm, and Oasis ODF. Other acceptable formats include PDF.

A Word About Microsoft

- ◆ MS has been a good business partner for the Commonwealth for many years
- ◆ Their products and services are the foundation of many successful IT projects undertaken by the Commonwealth
- ◆ Commonwealth values relationship with MS and looks forward to continuing it into the indefinite future
- ◆ Governments have reacted only recently because XML only recently in play given recent OASIS adoption of XML ODF and prominent role in future MS releases. First opportunity for government to ensure that office documents interoperable via xml.
- ◆ Throughout this process MS has listened to the Commonwealth and continued a fruitful dialogue that we look forward to continuing.

Concerns regarding use of non-open document formats

- ◆ XML a data interchange format and the electronic lingua franca of the future
- ◆ XML an internationally recognized standard adopted by W3C and developed with the support of a wide range of players in the IT community (including MS)
- ◆ XML itself is an open standard

Some XML reference schemas constitute Non-Open Document Formats

- ◆ Not developed by an open community
- ◆ Not affirmed by a standard setting organization
- ◆ Subject to overly restrictive licenses that frustrate development of products that support the format

Public Policy Concern re: Non-Open Office Document Formats

- ◆ Massachusetts is a sovereign entity.
- ◆ Its documents belong to its citizens.
- ◆ Access to the documents owned by a sovereign entity and its citizens cannot be controlled by a private company, however benign
- ◆ The only acceptable format for the creation and preservation of government records is an open standard format.

Practical Concerns re: Non Open Document Formats

- ◆ Access to documents today: public records
- ◆ Access to documents tomorrow: short and long term records retention; permanent archiving
- ◆ Past experience with loss of access to documents formatted in abandoned proprietary formats

MS Office 2003 XML Reference Schema Patent License

- ◆ Based on open XML standard
- ◆ Proprietary extensions to XML schema only available in binary form and only accessible using MS product
- ◆ Not developed and maintained through an open participatory process
- ◆ Not adopted by standard setting organization
- ◆ RAND license, but terms vague and restrictive

Negotiations with MS

- ◆ 2004, Commonwealth negotiated three changes with MS in its worldwide patent license for the XML reference schema:
 - Perpetual
 - No violation for opening and reading government documents
 - Some clarification to restriction language

Revised MS XML Reference Schema License

- ◆ Open license, but not open enough; still overly restrictive for developers who would develop product supporting the MS version of XML
- ◆ Still not created and maintained affirmed by standard setting organization
- ◆ Public comment still overwhelmingly negative

ETRM Data Format Standards Today

- ◆ ETRM v3.5 identifies standards for Open Formats and for Other Acceptable formats
- ◆ Standards for Open Formats:
 - OpenDocument v1.0
 - Plain Text Format
 - Hypertext Document Format v1.5
- ◆ Standard for Other Acceptable Formats:
 - Portable Document Format v1.5

OpenDocument Format Standard

- ◆ Developed by OASIS, non-profit standard setting organization. OASIS supported by private sector entities including Microsoft, Sun, IBM (although MS did not participate in developing OpenDocument Format). Developed through an open process
- ◆ Standard published and openly available
- ◆ Minimal, open license terms (OASIS copyright, Sun covenant not to enforce patent rights)

ETRM Version 3.5 Open Document Format Requirements

- ◆ From September 21, 2005, onward, no new acquisition of office applications that do not support the OASIS Open Document Format. Agencies may use their current MS or other vendor licensed office applications as long as they use methods to save documents in Open Document Format.
- ◆ Agencies must develop implementation plans that will implement the standard by January 1, 2007.
- ◆ From that date forward, no Executive Department office documents will be created in any office applications that do not support Open Document Format. Agencies may use their current MS or other vendor licensed office applications as long as they use methods to save documents in Open Document Format.

Process of Developing ETRM 3.5

- ◆ Discussions on open formats held with industry representatives and experts (i.e.- Open Format Summit)
- ◆ Draft Version 3.5 posted online for 11 days for public comment
- ◆ Comments received from over 100 individuals, companies and nonprofit organizations in Massachusetts, other states and abroad
- ◆ Final version, FAQ and Public Comments posted online at www.mass.gov/itd

Implementation process

- ◆ ITD will work with agencies to develop agency-specific implementation plans, as well as develop an enterprise implementation plan
- ◆ Every plan will take into account the agency's need for smooth and uninterrupted provision of services.
- ◆ ITD will not disenfranchise the community of persons with disabilities; we will work aggressively to address their needs and we will fully comply with state and federal disability law

Public Comment



Accessibility

- ◆ Confusion about whether we're requiring transition to Linux OS and desktop---we're not
- ◆ Implementation will be designed to fully comply with disability law; the community of persons with disabilities will not be disenfranchised.

Applicability

- ◆ ODF requirement only applies to office documents like Word, Excel, PowerPoint
- ◆ Does not apply to municipalities
- ◆ Does not apply to those who send us documents...vendors, citizens, municipalities
- ◆ Does not apply to branches of government other than the Executive Department

Legacy Applications

- ◆ Many don't use office documents
- ◆ Some use them only in connection with documents submitted---which we cannot regulate
- ◆ Implementation plans will not require abandonment of expensive mission critical agency systems, although over time agencies must consider modifications where feasible.

Interoperability with External Parties

- ◆ Agencies communicate with citizens, businesses, other states, the Federal government, advocacy groups, etc.
- ◆ Implementation will not require that we communicate with external parties using ODF documents if those documents cannot be opened by the external parties or they require use of other formats. Most apps supporting ODF permit easy translation to multiple formats for outgoing documents.

Interagency and intra-agency interoperability

- ◆ Implementation will take into account whether users need to communicate with those in their agency or other state agency who cannot open ODF documents.
- ◆ Most apps supporting ODF permit easy translation to multiple formats for outgoing documents.

Migration of existing documents

- ◆ Policy does not require that existing documents be migrated
- ◆ Applications that support ODF can open binary formatted MS documents; currently only a tiny percentage of the Commonwealth's records are in XML.

Implementation Cost

- ◆ Migration to ODF: license acquisition (?), training, implementation, integration
- ◆ Cost must be considered in light of cost to migrate to new MS Vista OS and MS Office 12

Maturity of ODF

- ◆ Office document technology is mature
- ◆ ODF is based on mature technical standards (more widely used in Europe for some time)

Full fidelity and backwards compatibility

- ◆ Current version of ODF appears to be compatible with current binary format versions of Office documents
- ◆ Backwards compatibility not required internally because no requirement that preexisting documents be migrated

Available MS Office tools more feature rich than apps that support ODF

- ◆ Even assuming that this is true, do our state government employee users need these features?
- ◆ Those employees who need as yet to be identified features that are not available in apps that support ODF (e.g. persons with disabilities) will be able to keep MS Office until ITD provides acceptable alternatives.

Vendor lock in

- ◆ With 90% of our desktops MS, isn't that what we have now?
- ◆ ODF requirement will increase competition and lead to more choices for agencies among vendors of office products because open standards prevent vendor lock-in.

Why are we doing this when no other states are?

- ◆ If we waited for other states to lead the way, we would not have had...
 - In 1848 First Public Library in the US
 - In 1635 First Public school in the US
 - In 1897 First Public Subway in the US

We're in good company

- ◆ EU endorses ODF and recommends its as the basis for standards for file formats and interchanges
- ◆ Indonesia for all government documents; France for ministry of finance and economy; Finland; Singapore municipal department; Brazil ministry of health; UK Bristol City Council; City of Vienna.....

Summary

- ◆ Data Format standards are part of the broader Open Standards initiative
- ◆ All documents created and saved by state agencies from January 1, 2007 onward must be created using office applications that support open document format. Agencies may use their current MS or other vendor licensed office applications as long as they use methods to save documents in Open Document Format.
- ◆ All agencies must develop implementation plans that result in compliance by January 1, 2007
- ◆ No further acquisitions of office applications that fail to support the Open Document Format
- ◆ Full text of Policies and ETRM available at www.mass.gov/itd