

NSW Young Lawyers CLE Seminar - Open Standards, Open Content and Open Source

'Open Standards Open Content'

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Standards are not a subject that the Legal Profession usually considers outside of the context of Negligence Law or Professional Misconduct. This Paper explores how technical standards can and will impact on Legal Practice; on issues such as how a Law Practice owns and control its documents; how Law Firms' web sites and documentation meet interoperability, accessibility and security standards

1. What is a Standard?

A standard is an agreed measure, method or mechanism recorded sometimes as a blue print or a specification. It is widely agreed or adopted so that it does not have to be re-measured, re-invented or re-designed and so that an unending number of mismatching alternatives do not have to be used; so that the wheel does not have to be re-invented.

There can be other sorts of standards such as measures of levels of things to make value judgments and comparative analysis but these are not the standards under consideration in this Paper. For once in our professional lives we are going to ignore professional standards.

Standards are adopted for varied reasons including to achieve consistency and efficiency and also for safety or other social benefit. To a large extent the adoption of standards was driven by the accidents that occurred in factories during the Industrial Revolution. The American Society of Mechanical Engineers [ASME](http://www.asme.org/), <http://www.asme.org/> one of the first voluntary standardizing bodies, was established in 1880, at a time when, according to their records, over 50,000 fatalities a year were being caused by explosions in pressures systems on land and at sea. Roods, acres, chains, miles, yards, feet and inches have been superseded in Australia by metric standards to make measurement based upon simpler base 10 numeric calculation.

Standards are also an economic tool of competition. Companies will compete to have their new mechanism made the standard. Groups of Companies will align themselves behind a standard to gain a foothold in a new market. In the video market the VHS became the standard over Betacam. Currently Blu-Ray is emerging over HD DVD.

Standards by virtue of their inherent efficiencies are used as a basis for building industry and infrastructure. In the Industrial Revolution it was railways and in the Communications Age it is electromagnetic standards and now digitisation standards; VHS vs PAL vs SECAM; HDTV vs SDTV.

Standards (without being exhaustive) can be set by private agreement, arise out of competition, established by collective agreement, convention and imposed by Legislation. They may be entirely voluntary or enforced by loss of economic advantage, breach of

contract, expulsion from association, and criminal penalty.

Bob Sutor, Vice President of Standards and Open Source for the IBM Corporation, groups standards into *ad hoc*, community and *de jure* standards. See http://www-03.ibm.com/developerworks/blogs/page/BobSutor?entry=open_standards_vs_open_source1

Ad hoc standards arise out of competition where one standard gains precedence enforceable by participation in a perceived economic advantage or other convenience. Community standards are ones set by groups with a common goal, eg the World Wide Web Consortium W3C. The International Standards Organisation (ISO) is a *de jure* Standards Organisation.

2. What is an Open Standard?

Whether or not a standard is open is a question of degree.

A proprietary (owned) standard can be an open standard. You can be charged to use an open standard. For example there is the MP3. **MPEG-1 Audio Layer 3**, developed at the Fraunhofer institute which has arguably become a standard audio file format for digital players, (see <http://www.iis.fraunhofer.de/amm/techinf/layer3/>). Anyone can encode digital audio using this lossless psychoacoustic compression algorithm but you have to pay a license to make software that does the encoding (see <http://www.iis.fraunhofer.de/amm/licensing/index.html>).

A completely open technology may be free but still not have become a standard, such as the ogg vorbis lossless, psychoacoustic audio compression algorithm. (see <http://www.vorbis.com/>). Whilst the ogg vorbis file has specifications that are similar in function to the specifications of the mp3 file the ogg vorbis specifications do not share the breadth of global adoption and industry agreement to build devices that conform to the specs.

How do you measure the degree of openness? Bob Sutor argues (persuasively in my view) that this depends on the answer to these 5 questions:

1. How is that standard created?
2. How is it maintained after Version 1.0?
3. What is the cost of getting a copy of the standard?
4. Are there restrictions on how I can implement the standard?
5. Can I use just a part of the standard or extend it and still claim compliance?

The more transparent, accessible, inclusive and collaborative, the lower the costs of acquisition and participation, the fewer the restrictions in implementation and the more flexible the use the more open the standard. Flexibility here does not mean variation of the standard but flexibility as to modes of adoption and extension of the standard.

Hyper Text Markup Language is a celebrated example of a widely adopted code language. The World Wide Web Consortium W3C operates to maintain consistency, transparency and accessibility of html so as to maintain versions (version. 4.0 to XHTML etc) of it as a Standard and to keep that Standard as open as possible.

3. The Open Document Format

The Open Document Format serves as a good example of a Community Standard that may soon be a *de jure* standard. It also illustrates the comparative strengths and weaknesses with its *ad hoc* rival Microsoft Word.

The vast majority of documents that the legal profession has been writing since in or about 1990 to date are in Word for Windows.

"The document formats of the various versions of Word change in subtle and not so subtle ways; formatting created in newer versions does not always survive when viewed in older versions of the program, nearly always because that capability does not exist in the previous version. The DOC format of Word 97 was publicly documented by Microsoft, but later versions have been kept private, available only to partners, governments and institutions."

http://en.wikipedia.org/wiki/Microsoft_Word#Word_1990_to_1995

It is sold commercially under strict license. It is written and executable in machine code only readable binaries. The binaries are interpreted by the Microsoft Office Writer software so that human readable text is visible. This indicates that whilst word is the most highly successfully adopted standard text document and editor it is also the least open.

In the case of the Open Document Format it is written natively in more than one text editor (eg. Star Office, Open Office, Kword, Abiword and others, http://en.wikipedia.org/wiki/List_of_applications_supporting_OpenDocument) of which many are free and downloadable. There is no restriction on what other platform or editing program you can build or port to read and write it and there are no restrictions or license royalties or fees. The document is written in XML human readable code which is compressed by zip algorithm. You can unpack an .odt file with unzip and look at its code (.odt is the file extension of the Open Document Format)

The Open Document Format was passed as a Standard document format by [Organization for the Advancement of Structured Information Standards](http://www.oasis-open.org/) OASIS, <http://www.oasis-open.org/> on 25 May 2005. In its prior existence it was an XML open format specification developed by Sun Microsystems, with its Open Office Organisation Project and had the file extensions .sxw

To achieve status as an OASIS Standard the ODF passed through the OASIS Standards Approval Process. Put briefly that process includes becoming a project appointed to an OASIS Technical Committee which requires that it have been approved and used by no less than 3 Member Organisations. The Technical Committee then is charged with the process of developing that working specification to become a Committee Specification which is then voted on by the OASIS Board who determines its eligibility as an OASIS Standard.

"Officers of both the OASIS Board of Directors and Technical Advisory Board are chosen by democratic election to serve two-year terms. Consortium leadership is based on individual merit and is not tied to financial contribution, corporate standing, or special appointment."

<http://www.oasis-open.org/who/>

4. What have open Standards got to do with Lawyers

Maguire vs. SOCOG

Standards and the Law intersected spectacularly in *Maguire vs. SOCOG*, (2001) EOC 93-123 Human Rights and Equal Opportunity Commission Decision delivered 24 August 2000 Equal Opportunity Disability, (See too <http://www.contenu.nu/socog.html>)

Mr. Maguire complained to HEREOC under the *Disability Discrimination Act C/W on the* grounds that the SOCOG web site was not accessible to him. The site lacked text alternatives to visual images and he was unable to navigate the site using his refreshable braille display technology. SOCOG was fined \$20,000.

Open Standards work very well to provide transparency and accessibility. If a site and browser conforms to W3C Standards it will meet accessibility criteria and perform consistently. This case illustrates how the adoption of Open Standards on the Internet can serve to limit the likelihood that there will be a lack of access to web content to persons with disabilities.

As Law Practices provide more services and information to clients via the use of their web sites the exposure to liability for failing to meet the requirements of all clients increases. This is not just in respect to disabilities but liabilities also where a duty of care to provide consistently legible secure documents and services arises. This is already reflected in the requirement of Law Practices to complete particulars of provision of services via the web in filling out annual Professional Liability Insurance Premiums renewals. Open standards can serve to deliver consistency and access at lower costs by making standards compliant technologies cheaply and universally available on the Internet.

ODF in Massachusetts

Archiving of public documentation and perpetual access to digitised information is of great importance to Government and business. The State of Massachusetts home of the Boston Tea Party, chose to adopt a policy of migration to ODF to meet its social obligations.

On 21 September 2005 of the Commonwealth of Massachusetts' (CoMA) Information Technology Department (ITD) released a revision of its "Enterprise Technical Reference Model Information Domain" adopting a policy to migrate to the OpenDocument format" by January 1, 2007

The CoMA Secretary for the Executive Office of the Administration of Finance, Eric Kriss, speaking before the Massachusetts Software Council annual meeting, in January 2005 said:

"It should be reasonably obvious for a lay person who looks at the concept of Public Documents that we've got to keep them independent and free forever, because it is an overriding imperative of the American democratic system that we cannot have our

public documents locked up in some kind of proprietary format or locked up in a format that you need to get a proprietary system to use some time in the future.

So, one of the things that we're incredibly focused on is insuring ... that public records remain independent of underlying systems and applications, insuring their accessibility over very long periods of time. In the IT business a long period of time is about 18 months. In government it's about 300 years, so we have a slightly different perspective.

Open Formats insure also that there are minimal restrictions imposed on the use of applications needed to access those records and files. And finally, Open Formats support the integrity of public records when we're going to need to do a file conversion as required probably in the course of normal technological evolution. So if we have something in a format of 2005, and it's going to need to be converted in 2038 into something that we've never thought of yet, we need to be able to do that without losing the integrity in the underlying information. "

[For a comprehensive review of the entire process and outcome see http://www.rlg.org/en/page.php?Page_ID=20894&Printable=1&Article_ID=1820]

Private Law Practices are more reliant than ever upon continuous, transparent accessibility to and control of their data files in which is contained their correspondence, contracts, memos, bills, accounts and in effect the entire property of a Law Practice. The degree of '*restrictions*' on access to those files is a measure of how many tenths of that Law will be in the possession of the Practice.

There are also good economic reasons for the adoption by legal practices of open standards but that is for another Paper.

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