GESMER UPDEGROVE LLP

Attorneys at Law

THE STANDARDS OF OUR TIMES

50th Issue Anthology – A ConsortiumInfo.org eBook

Dimensional, safety and other standards implemented in physical products have been pervasive since the nineteenth century, but truly open systems are a recent innovation in the world of information technology. The selections in this chapter explore how this transition from a proprietary to an open-standards-based information infrastructure came about, why those who are most skillful at participating in standards development can benefit from this transition, and how participants can best evaluate and participate in standards development organizations.

PART TWO: STANDARDS AND GOVERNMENT

Chapter Four: **STANDARDS AND INTERNATIONAL TRADE**   **21**

Globally adopted standards can create larger markets for domestic goods, but also subject domestic industry to foreign competition. In response, some interests have at times sought the adoption of global standards abroad to open foreign markets to domestic products, while at the same time erecting standards-based barriers to keep foreign products out of domestic markets. The World Trade Organization, among other mechanisms, has been utilized to secure the benefits of open standards and to prevent the erection of such barriers - with varying success. The articles in this chapter examine the decisions being made in China today on these topics, and the ways in which US standards policy might be revised to address modern realities. The final piece reflects the additional complexities that can intrude upon standards-based trade policies when cultural identities are at stake.

Feature: **The Yin and Yang of China's Trade Strategy: Deploying and Aggressive Standards Strategy Under the WTO (April 2005)**

Trends: **Reimagining a National Standards Strategy (January 2005)**

Standards Blog: **Soy Sauce, Kimchi and the Golden Rule (October 2004)**

Chapter Five: **THE ROLE OF GOVERNMENT IN STANDARD SETTING**   **22**

Governments wear many hats in the world of standards. All at the same time, they are standards developers through the exercise of their regulatory power, standards consumers when they purchase goods and services, standards influencers when they participate in standard setting and issue procurement requests, and standards policy makers when they facilitate international trade. In this chapter, I contrast the approaches taken by national governments, examine the recent history of standards policy development in the United States, and offer thoughts on how such policies, and government interaction with industry, could be optimized in the future.

Trends: **Top Down or Bottom Up? A Tale of Two Standards Systems (April 2005)**

Feature: **A Work in Progress: Government Support for Standard Setting in the United States: 1980 – 2004 (January 2005)**

Feature: **Understanding the Roles and Optimizing the Relationships of Government and SSOs (August 2005)**

Feature: **The Role of Government in ICT Standardization (February 2007)**

Standards, government and public opinion are intersecting more frequently as information technology becomes more essential to participation in society, and as environmental challenges require complex international solutions based upon monitoring of emissions and pollutants. The controversies that can arise when vested commercial interests are challenged by government efforts to protect public documents (quickly taken up by the competitors of the incumbent), and the lack of existing global governmental mechanisms to address environmental issues, are explored in this chapter.

PART THREE: STANDARDS AND SOCIETY

Standards are everywhere around us. But as with so many other aspects of modern life, we are rarely aware of them, or appreciate their importance. In this chapter, I provide three examples of standards areas of importance, each of which is addressed through a different consensus-based process, and each of which affects a different area of modern life.

Standards come in all types, and can evolve as well as be developed through formal processes. The less-regimented standards of the former sort are both pervasive as well as useful, and illustrate the various tradeoffs made in the creation of formal standards as well. In this chapter I use a few everyday examples to make the point, ranging from electric organs, to political leanings to index funds.

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The Standards of Our Times

50th Issue Anthology – A ConsortiumInfo.org eBook

P R E F A C E

Thoughts on 50 Issues (and the Future)

In the Spring of 2002 I decided to build a new Web Site that I would call ConsortiumInfo.org. The ambitious mission statement I wrote for myself was (and continues to be) as follows:

> The goal of ConsortiumInfo.org is to be the most comprehensive source of information on the Internet regarding standards, standard setting, and open source software, and on the role that these essential tools play in business and society.

The resource I had in mind would showcase my law firm's and my expertise in setting up and representing standard setting organizations, and would provide a means by which potential clients could, through on-line searches, become aware of our existence and proficiency. Further to that goal, I began by writing a series of long topical pieces that were eventually collected under the heading The Essential Guide to Standard Setting Organizations and Standards (Russ Schlossbach, an associate with our firm, researched and wrote the very detailed and useful Law, Cases and Regulations *Guide* material under the supervision of my partner, Lee Gesmer).

But what began as a marketing-oriented effort soon morphed into something of an obsession, providing an outlet through which I could vent my creative energies and share my ideas on a variety of standards-related and societal topics. As a result, I quickly decided to add what became the most complete list of information and communications technology standard setting organizations on the Web (the Standard Setting Organization and Standards List), and then a News Portal that I update daily, which now hosts over 3,200 articles in its archive. In order to facilitate research as well as the teaching of standards courses in colleges and universities, I added the Standards MetaLibrary, which contains the abstracts of over 1,000 categorized articles on standards related topics. And two years ago I added the Standards Blog. Since then, I've written 315 blog entries (about 600,000 words), and the blog is visited by as many as 100,000 readers a month. Other site features added during the last five years can be found in the tab bar above and in the detailed Site Map.

This journal was launched about six months after ConsortiumInfo.org went live, with the delivery of the inaugural issue in December 2002. Since then, I have written another 49 installments, containing altogether 350 editorials, articles and other features, and comprising another c. 600,000 words. Given that an average length book has 60,000 words, these issues could be bound into 10 full-length books, each of about 200 pages. Bind up the blog entries as well, and you would have another 10. Altogether, quite a lot of "news, ideas and analysis."

After this amount of output, it seemed a good time to take stock of what I've written in the past, and how best to proceed in the future. Compiling and presenting this anthology issue is one result of that process. Undertaking an overall re-assessment of this publication was another. Accordingly, with this issue you will notice several changes. Most obviously, you'll see that I've adopted a new and more current presentation that I think provides a cleaner look and a more readable format.

You'll also note that this issue is identified as a two-month rather than a single-month issue. Over the past four and a half years I have succeeded in writing 10 to 12 issues a year. But with the launch of my blog, as well as an increase in speaking and travel obligations, I find that it's necessary for me to cut back to a more realistic and less exhausting schedule. Beginning with this issue, I will be converting to a bi-monthly, six-issue per year schedule.

The final change that you will notice is that I've renamed the publication itself, retiring the name *Consortium Standards Journal* in favor of a new, and I think more appropriate, name *Standards Today*. The original title was in fact a compromise choice, meant to harmonize with a now-discontinued publication of my law firm (the *Technology Law Bulletin*). It quickly became less descriptive, as both the scope as well as the depth of the material I wrote steadily increased. The new name, I believe, is more representative of what readers now find here, and what they can look forward to reading in the future.

Which brings us back to what you will find in this issue. Long time-readers will know that I write about the broader impact of standards on society rather than on the narrow, topic of technical specifications alone. It is this broader significance that makes the phenomenon of standards fascinating to me, as it meaningfully incorporates economics, history, linguistics, political theory, and much more. From this perspective, we can see that the pervasive practice of standard setting throughout history is in some sense intrinsic to what it means to be human. I have tried to capture the relevancy of standards in all their many forms to our lives today in the title to this eBook: *The Standards of Our Times*.

Tracing the common thread of standards as it weaves through humanity's existence, from pre-history through recorded time and into the space age, offers a fascinating journey that can tell us much about who we are. My goal in making the selections included in this 50th Issue Anthology is to retrace a few favorite steps on my own journey down that path, and to help readers (old and new) appreciate the relevance of standards to society and their own lives. I will be very pleased if it achieves that purpose.

<div align="right">

Andrew Updegrove
Editor and Publisher
2005 ANSI President's
Award for Journalism

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The complete series of Consortium Standards Bulletins can be accessed on-line at www.consortiuminfo.org/bulletins. It can also be found in libraries around the world as part of the EBSCO Publishing bibliographic and research databases.

INTRODUCTION

Who Cares About Standards?

Andrew Updegrove

This site hosts many thousands of well-used Web pages, and some 1,500,000 words. Who is it that has the appetite to read so much about standards and their importance to society?

That is an interesting question, and its answer might surprise you. ConsortiumInfo.org hosts an average of 275,000 visitors per month, serving about 700,000 pages to those visitors. That answers the "how many" part of the question. But you may also wonder who these people are, where they live, and what sparks their interest. Answers to these questions can be found in the access logs for the site, and I'll share what they tell me for the first six months of 2007, as well as what I've learned from other sources.

The following table shows the top five national users, as well as the countries in the 50 – 54 spots. The sampling gives a flavor of not just the universality of interest in standards information, but also of the countries that are most actively seeking that information, regardless of their national language.

Rank	Country	Visitors (1/1-6/30/07)	Percentage
1	United States	1,046,559	63.67%
2	China	134,870	8.20
3	United Kingdom	54,182	3.77
4	Canada	36,941	2.25
5	Germany	26,804	1.63
50	Saudi Arabia	1,087	0.07
51	Slovenia	1,068	0.06
52	Yugoslavia	1,011	0.06
53	Croatia	913	0.06
54	Venezuela	857	0.05

The full list reveals that visitors arrive from virtually every country on earth – including multiple visitors from the Cocos Islands, a collection of tiny atolls that (according to the Wikipedia) had a total population in 2004 of only 624.

The listing of visitors by city in the table below is equally intriguing. Note in particular which city has more citizens with an interest in standards than any on earth, language skills notwithstanding. China takes standards very seriously, and has powerfully incorporated their development and uptake into national development and trade policy.

Rank	City	Number
1	Beijing, China	74,747
2	Redmond, WA	46,858
3	Herndon, VA	11,687
4	Washington, DC	11,610
5	Mount Laurel, NJ	10,099
6	Warsaw, Poland	10,016
7	Cupertino, CA	9,953
8	London, UK	9,943
9	Amsterdam, Neth.	9,594
10	Moscow, Rus. Fed.	9,320

The second place ranking is likely an aberration, and if so primarily reflects my ongoing coverage at my blog of the battle between the Open Document Format and Microsoft's Office Open XML format. But the next two entries are indicative of the importance of standards to both government and industry.   I find it significant that only one city in California, and none in Massachusetts or any other US technology center, made the top ten sources of visitors to this information and communications technology Web site – although Warsaw, London, Amsterdam and Moscow did.

Independent of that fact, the origin of US traffic is interesting as well. On a state-by-state basis, the top ten points of origin are as follows, and track the location of American technology centers more closely:

Rank	State	Visitors (1/1-6/30/07)
1	Washington	55,414
2	California	51,157
3	Virginia	30,180
4	Massachusetts	20,780
5	New Jersey	18,042
6	Texas	16,872
7	Colorado	16,101
8	New York	13,123
9	District of Columbia	11,696
10	Georgia	9,794

Geography can only tell us so much, however. Location aside, who is it exactly that is seeking so much information about standards? To find the answer to this question, I look to two sources. The first is the site access logs once again, which tell me which corporate, academic and other institutions are the points of origin of visits by their employees, students, and other users. As I maintain a privacy policy, I will present this information anonymously:

Rank	Type of Organization	Visitors
1	Technology Co.	46,760
2	Top 10 US University	4,067
3	German Research Institute	3,950
4	UK Insurance Co.	3,646
5	Standards Service Provider	3,485
6	Top 10 US University	3,351
7	Consulting Co.	2,747
8	Chinese Gov't. Agency	2,205
9	US State University	2,056
10	US Software Co.	2,015

Of course, this site includes many types of standards-related information, focusing on everything from current events to more academic subjects. In order to see who is most interested in more detailed examinations of standards topics, I can turn to the occupational profile that I ask subscribers to this journal to fill out as part of the subscription process. The available data for those recipients is as follows:

Rank	Category	Percentage
1	Corporate employee	
2	Professor or student	
3	Consortium employee	
4	Government employee	
5	Attorney	
6	Media	
7	Other	

Still, that information provides only a sampling of those that actually read this publication, as it is drawn from subscribers alone. In fact, the real readership is far more substantial, as the archived copies are downloaded in PDF form by tens of thousands of site visitors every month. The full series also appears in most academic libraries, through the EBSCO databases in which they are included.

And finally, there is the anecdotal information that I receive via email. Here are a few samples of emails I have received, indicating the diverse use to which standards-related information can be put:

From a corporate director of standards:

> Let me congratulate you on a wonderful article [on Standards Wars]. It is a textbook for strategic standardization and understanding the moves/countermoves to anticipate depending on your strategy. I intend to make it required reading for my standards staff and certain key management folks. Thanks for writing it.

In response to an editorial on human rights standards:

Long time reader, first time writer. Your editorial this month is not only well-written, but timely. I've already forwarded it on to a number of people I think would either find it valuable, or feel need to read it.

While I find it unfortunate that articles such as this even need to be written in this day and age, the real tragedy is more likely that they aren't being read enough.

From the first Director of Standards hired by an emerging Third World nation:

I would not have got this job had I not read all your articles before the interview. The panel, which comprised of the _____ Council of Standards, were so impressed. They tell me now that I just stood out as the best candidate for the position. I actually have an "Updegrove" file in my office. It is very handy when I have to pull a rabbit out of a hat to impress the Council.

From the President of an association providing benchmarking research for non-profits globally:

Your writings have helped us greatly at key junctures in the creation of the _____ Collaborative. In the early days (2003-04), it helped us define the role of our Advisory Council and working groups. Recently, we have used them to help us think through the implications of changes in our "standards", which in this case refers to a common taxonomy for _____.

Fortunately, many of the patent issues don't apply to us, but the principles do. Thank you again for your leading edge and quite practical thinking.

From a School of Management professor:

I am an economist who has been writing about standard setting for a couple of years. Your web site is fantastic. I have attached a draft of a new paper where the initial data were collected using your material on IPR policies.

The answer to the question posed in the title to this article, then, is that a very great number of people from many disciplines, and from all over the world, care about standards.

Sadly, however, the level of interest in standards in the broader sense may be greater than the reliability and supply of information available to satisfy it. After all, the standards development process is rather complex, and not as transparent as could be desired. Moreover, except when a standards war involving a mass-market product is waging, standards are rarely considered to be sufficiently newsworthy to inspire many journalists to attempt to learn much about them.

One purpose of this journal in general, and of this issue in particular, is therefore to demonstrate the wealth of topics that are available for both serious as well as subjective examination by authors, and through the statistics shared above, to also demonstrate that there is an audience waiting to reward those efforts.

To more forcefully make that point, I have grouped the material I have selected under a variety of categories covering a wide area of topics, and varying degrees of seriousness. I

expect that if you have any interest in standards at all, you will find something to catch your attention. Hopefully, my thoughts will set you to thinking as well.

Comments? updegrove@consortiuminfo.org

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Selection:

Consider This: [Do Standards Matter?](#) (October 2005)

PART ONE:

STANDARDS DEVELOPMENT

AND

STANDARDS STAKEHOLDERS

Chapter One:

G o a l s:

STANDARDS DEVELOPERS

AND WHY THEY PARTICIPATE

Dimensional, safety and other standards implemented in physical products have been ubiquitous since the nineteenth century advent of railway gauges, screw threads and steam boilers. In the world of information technology, however, proprietary system vendor strategies have prevailed until recent times, limiting the degree to which interoperability standards have been developed and utilized. As a result, vendor claims relating to "open systems" were more often wistful or promotional than factual during the early decades of the information age.

With the convergence of information and communications technology and the success of the Internet and the Web, however, the value of global networks has become demonstrable, increasing demand for the types of truly open and interoperable systems that can allow end users to efficiently realize that value. The most nimble and adaptable vendors have seized to the market opportunities offered by this newly networked world, and changed their strategies to answer the call for open systems. The result has been a dramatic change in not only systems architectures and vendor strategies, but also the realization that (for example) selling services and adopting open source software development practices can provide a less risky business model than developing and selling proprietary products.

The selections in this chapter explore how this transition from proprietary systems to an open-standards-based information infrastructure came about, and the competitive advantages that those who are most skillful at participating in standards development can realize. The last article is a primer on how stakeholders can best evaluate and participate in standards development organizations.

Selections:

Editorial: IT Standards Come of Age (January 2004)

Trends: Darwin, Standards and Survival (June 2003)

Feature: Participating in Standard Setting Organizations: Value Propositions, Roles and Strategies (October 2006)

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Chapter Two:

P r o c e s s:

STANDARDS DEVELOPERS AND

HOW THEY PARTICIPATE

There was a time not so long ago when standard setting was a largely collegial and leisurely process that was engaged in by standards organization member representatives who grew to know each other well. As standards became more essential in the information and communications technology industries, however, they also came to have greater strategic value. With that value has come the opportunity for standards development participants to gain advantage over their competitors through influencing the specific standards, and standards elements, that are finally adopted and implemented.

At the same time, the number of patents awarded in many areas of standardization has grown exponentially. The result is that patent owners may at some times wish to withhold the right to license "necessary claims" under their patents from those that wish to implement a standard, and at other times may actively seek to ensure that such licenses will be needed, due to the substantial royalties and strategic benefits that can be gained when a patent would be infringed by an important standard.

The results of these trends include more gamesmanship in standard setting, the simultaneous launch of competing standards, outright "standards wars" between feuding vendor groups, and the rise of the "patent troll" (i.e., a non-vendor patent owner that seeks only to license, and not implement, its patents), and the "submarine patent" (a patent revealed, often by a patent troll, only after the market has become "locked in" to the standard that infringes the patent). Not surprisingly, these behaviors have led to a desire among some vendors to flush out potentially significant patent claims (usually referred to as intellectual property rights, or simply IPR) early in the standards development process.
This chapter highlights these issues in depth. The first article explains the difference between beneficial "standards competitions" and truly destructive standards wars, and the strategies that standards development participants use in navigating these waters. The second explains a current hot topic in standard setting: whether or not standard setting organizations should adopt policies that would permit or require the so called "ex ante" disclosure of IPR prior to final adoption of a standard. The third article provides an update and a historical review of the most-watched litigation of the decade involving standards development: the private suits and Federal Trade Commission prosecution of semiconductor design company Rambus Incorporated, each of which alleged the "gaming" of the technical process by Rambus. The final article focuses on another challenge that the standard setting process is grappling with today: the increasing popularity of open source software licensing and development, and the difficulties inherent in reconciling the demands of this process with the IPR policies needed to make the standards development process work

Selections:

Feature: Standards Wars: Situations, Strategies and Outcomes (March 2006)

Editorial   Meeting in the Middle (May 2006)

Feature: *Ex Ante* Disclosure: Risks, Rewards, Process and Alternatives (June 2006)

Chapter Three:

O u t c o m e s:

S T A N D A R D S   D E V E L O P M E N T   A N D

T H E   E N D   U S E R

When it comes to standards, all are affected, but few are self-chosen to do the actual development.

While the accredited standards development system recognizes the right of all "stakeholders" (i.e., all those affected by standards, as well as those developing them) to influence the standards development process, achieving the goal of full stakeholder representation can be challenging, due to the cost and effort required to participate in a meaningful fashion, and the lack of interest on the part of some classes of stakeholders (such as most consumers) to do so. In the non-accredited system, many consortia try to bring commercial end-users into their organizations, but with varying success, and only a small number of such organizations seek to address the needs of non-technical and non-commercial interests at all.

The selections in this chapter focus on this reality and its implications from a number of perspectives. The first, an interview with the Technical Standards Program Director for NASA, provides a striking example of how end users can be very influential in ensuring that the standards they need are available to them, assuming they are willing to dedicate the resources required. The next article identifies the various classes of stakeholders that have significant interests in standards, and the levels and manners of their current participation, while the third explores some of the ways that broader participation might be achieved utilizing the Wikis and other Web based tools that are becoming increasingly effective in helping on-line collaboration communities grow.

The final article uses the concept of what I call the "personal datasphere" to illustrate why it is important for all stakeholders to become more involved in determining which standards are developed and implemented in areas of high individual impactas we become ever more dependent upon information technology.

Selections:

Trends: [Standard Setting at NASA: an Interview with Paul Gill](#) (July 2006)

Editorial: [The Affecting, the Affected and the Interne: Solving the Stakeholder Conundrum](#) (April 2006)

Feature: [Standards Stakeholders: Who Should, and Who Does, Set Standards](#) (April 2006)

PART TWO:

STANDARDS

AND

GOVERNMENT

Chapter Four:

STANDARDS AND

INTERNATIONAL TRADE

The use of standards is integral to the concept of international trade, in both the negative as well as the positive sense. When uniform standards are globally adopted and implemented, worldwide markets are created, as well as worldwide competition for goods and services. The positive effects for consumers include broader choices and lower prices. But those same effects can place domestic industry – and the jobs of consumers – at a disadvantage to foreign industries with lower fixed labor and other costs.

The result is often an effort by domestic industries (and sometimes governments) to seek adoption of global standards abroad to open foreign markets to domestic products, while at the same time requiring imported products to comply with "home grown" standards, or subjecting foreign products to more rigorous standards conformance testing procedures, in order to keep foreign products out of domestic markets. The World Trade Organization, among other mechanisms, has been utilized to try to realize the benefits of open standards and to prevent the erection of such barriers.

The first article in this chapter describes the vital role that standards are playing in the international trade strategy of China, and the aggressive manner in which that rapidly emerging nation is pushing the envelope of WTO treaty rules. The second re-examines the historical standards policies of the United States trade policy in light of modern realities. And the final article illustrates the complexity of administering open standard systems when not only competitive forces, but also cultural issues must be taken into account, while the second.

Selections:

Feature: [The Yin and Yang of China's Trade Strategy: Deploying and Aggressive Standards Strategy Under the WTO](#) (April 2005)

Trends: [Re-imagining a National Standards Strategy](#) (January 2005)

Standards Blog: [Soy Sauce, Kimchi and the Golden Rule](#) (October 2004)

Chapter Five:

THE ROLE OF GOVERNMENT IN

STANDARD SETTING

Governments wear many hats in the world of standards. All at the same time, they are standards developers through the exercise of their regulatory power in areas such as public safety (sometimes creating standards, and sometimes referencing private industry standards), standards consumers (when they utilize standards in contracting and purchase off the shelf standardized products), standards influencers (when they participate in standard setting, and when they select which standards to specify in procurement), and standards policy makers (in international trade).

While these roles are common to governments all over the world, different governments have adopted different strategies in practice, ranging from directing standards development on a national basis to leaving the creation of standards primarily to the private sector. Similarly, some governments have integrated standards closely into national trade strategies, while others have been primarily responsive to calls for assistance from industry when commercial interests cannot achieve their goals without government support.

In this chapter, I first review the differences in policy adopted by two nations with diametrically opposed standards strategies: China and the United States. In the next, I review in detail the substantial changes that the US federal government has made in its approach to standards development and usage over the past quarter century. In the next article, I focus more particularly on the interaction of the US government and information and communications technology during the same time period. And in the fourth and final article, I turn from the factual to the potential, and examine how industry and government might best work together in the US to their mutual advantage in the future.

Selections:

Trends: Top Down or Bottom Up? A Tale of Two Standards Systems
          (April 2005)

Feature: A Work in Progress: Government Support for Standard Setting in the
          United States: 1980-2004 (January 2005)

Feature: Understanding The Roles and Optimizing The Relationships of
          Government and SSO's (August 2005)

Feature: The Role of Government in ICT Standardization (February 2007)

Chapter Six:

CURRENT EVENTS

While the emergence of standards issues in the popular press has historically been a novelty, a number of forces are converging today that have brought both discrete standards as well as broader standards issues into the public eye. An example of the former upon which I have written frequently involves "open document formats," which are XML-based formats that make it possible to create documents that can be read and revised by any compliant software application with a high degree of fidelity. Absent the utilization of such standards, our ability to read today's documents in the future will be in question.

The first such standard to reach the marketplace was the OpenDocument Format, or ODF, an OASIS-developed standard that has now been adopted globally by ISO/IEC JTC1. More recently, Microsoft has made available the XML-based formats (which it calls Office Open XML, or OOXML) upon which its Office 2007 productivity suite is based. Microsoft contributed the specification for its formats to Ecma, a European-based standards organization,; which adopted OOXML in 2006. That specification is now being considered by ISO/IEC JTC1 as well, in a process that is receiving wide attention.

What launched this competition into the public eye was the decision of the Information Technology Division of Massachusetts in 2005 to specify open formats for procurement by the State's Executive Agencies, and to recognize ODF but not OOXML for that purpose. The resulting controversy is reviewed in detail in the first article in this chapter, while the consequences for the CIO that developed the policy are reviewed in the second. This year, bills were introduced (and defeated) in five US states to require the use of such formats, and similar efforts have been launched abroad. As of this writing, the saga is far from over.

The third article in this chapter turns to the unprecedented challenge presented by global warming, a harbinger of the ongoing resource and environmental issues that will face humanity in the future as population continues to grow. Challenges such as these will demand the development, deployment and international enforcement of a wealth of standards in order to craft and enforce necessary solutions – a process for which no existing global political system now exists.

My last article closes this chapter on a somber note, reminding us that governments are held to standards as well. History after all often provides examples that could guide us more safely through the dangers of the modern world – if only we heed them. It can therefore be illuminating to compare current events – and more significantly current decisions – to past decisions and their consequences. Sadly, the question I asked over three years ago in the title to the last article in this chapter has been all too conclusively answered in the affirmative.

Selections:

Trends:	[Massachusetts and Open Document: A Brave New World](#) (September 2005)
Standards Blog:	[What Price Public Service?](#) (January 2006)
Editorial:	[The Small Blue Sphere](#) (October 2005)
Standards Blog:	[Is Iraq "Another Vietnam?"](#) (April 2004)

PART THREE:

S T A N D A R D S

A N D

S O C I E T Y

Chapter Seven:

STANDARDS AND EVERYDAY LIFE

There are many essential elements in the infrastructure that supports modern life of which most people are blissfully unaware. One of these is standards, due to the pervasiveness of their use in every aspect of product design, safety, health care, services, and much more. But standards arise not only in the dry and traditional areas of technical specifications, but in endless other areas as well.

In this chapter, I illustrate a few common examples of standards of importance, each of which is developed through a different consensus-based process, and each of which affects a different area of modern life.

The first example comes from the legislative process, which must constantly create technically precise definitions – standards in their own right – upon which legislation and regulations can then be based. The example I choose to illustrate this area of standardization is the federal definition of "Wilderness."

In my second example I illustrate the importance of considering all design requirements before settling on an important standard. To make this point, I turn to the iPod – that wonder of modern technology that allows us to effortlessly download, carry in our pockets, and listen to volumes of music that would have been unimaginable only a few years ago. The format used to store this music, however is proprietary, and the device itself is fragile, and follows on the heels of many now obsolete and largely abandoned recording technologies. Will iPod-based electronic formats be as accessible in five thousand years as documents based on another format and vehicle – the clay cuneiform tablet – are today? The answer is more obvious than the reason why we assign so little importance to data survival and future access in product – and standards – development today.

And finally, I turn to sports to illustrate how universally standards of all types are needed to establish a level playing field (both metaphorically and otherwise) for competitive sports.

Selections:

Consider This:	How Do You Define A Wilderness? (August 2005)
Consider This:	Clay Tablets, iPods and Evo/Devolution (September 2005)
Standards Blog:	A Level Playing Field (September 2006)

Chapter Eight:

STANDARDS IN THE BROADER SENSE

The concept of the consensus-developed and consensus-adopted standard is one of the broadest and oldest constructs of human existence, ranging from precise instantiations, as in technical specifications, to more general, but no less important and pervasive tools, such as codes of ethics and conduct. Each is the product of a variously strict or organic consensus process, and each usually operates in the field on a voluntary, opt-in basis. In large part, the value of standards derives from this very consensus – the standard must be reasonably agreeable to all, or it will not become widely adopted.

The first standards were prehistoric, and included spoken and sign languages, followed by more abstract tools such as weights, measures and coinage. In this chapter, I explore several types of standards in the broader sense, each of which has become either broadly adopted, or which can be observed in human behavior. In doing so, I also offer some observations on why standards work and how, as well as the decisions that we make when deciding what types of standards we wish to deploy.

My first example is the Hammond B-3 Organ. You many not recognize the name, but you've been hearing the instrument itself all your life, and would recognize its unique sound in an instant. The B-3 also illustrates the effect of striking balances in the level of detail a standard dictates: every organ has a keyboard and various other attributes in common, but the unwritten, de facto standard of "organ-ness" allows endless innovation in design – in contrast to the much stricter standard that dictates the design of a closely related instrument – the piano.

My next example turns to both nature and politics. Evolution is a natural standardization process, by means of which biological design specifications arise and are implemented as species. So also with the behavioral characteristics that the resulting organisms demonstrate – including, I suggest, conservative and liberal viewpoints.

Lastly, I look to the rather aberrational way in which, as individuals, we often choose not to make use of otherwise perfectly useful standards – such as calorie-based diets and stock market index funds - choosing instead to defy reality and the odds in a (usually futile) effort to somehow beat the system
.

Selections:

Standards Blog   How Strict a Standard? In Praise of the Hammond B-3 Organ (February 2005)

Consider This: Standards, Evolution and Open Source (June 2006)

Standards Blog: Predictability and Standards Denial (September 2004)

PART FOUR:

STANDARDS

AND

THE FUTURE

Chapter Nine:

THE FUTURE OF STANDARDS

STANDARDS OF THE FUTURE

Clearly, the future (unless we contrive to terminate our own involvement in it) will see us become even more dependent on technology, and therefore on standards. In some ways, we are addressing this certainty with forethought, but in other ways we are being heedless of the risks inherent in our current course of conduct.

In this chapter, I explore various aspects of our technology-dependent future, both near term and otherwise. In the former category, I include a lengthy interview with Tim Berners-Lee, the inventor of the Web. In this piece, he explains his goals and predicts the effects of his current primary area of effort: designing and evangelizing for the implementation of the Semantic Web. I also offer my own thoughts on the subject.

Focusing on the midterm, I note the growing field of developing standards for use in space. With the recent increase and viability of private space ventures, a new generation of entrants into the standards development process can be anticipated in this pursuit.

Lastly, I focus on the long term. In the final two articles, I explore both the dangers as well as the promises of the Web. The risk I identify relates to the reality that as the breadth of digitized historical information increases, we will become more beguiled by the ease of on-line research. The inevitable result is this: that which is not converted to digital form will quietly and inevitably tend to disappear from view. In making this transition, we may carelessly lose all of the culture, literature and history that does not make the transition from written to digitized form.

In the more pleasant category of promises, I celebrate the opportunities for new scientific and cultural revelations and riches that may flow from Web enabled global collaboration.

Selections:

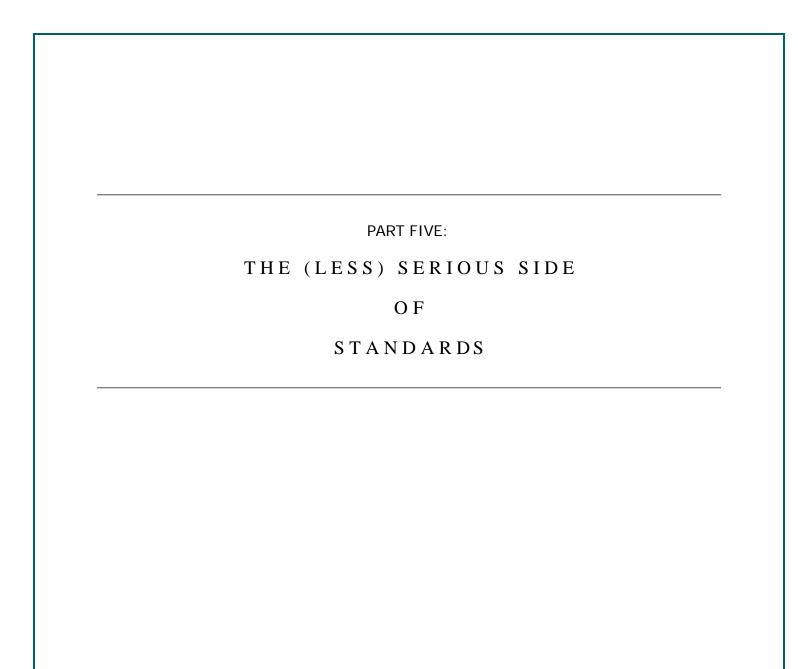|	
Editorial:	Web of Dreams (June 2005)
Feature:	The Future of the Web: An Interview with Tim Berners Lee (June 2005)
Editorial:	Rocket Science and Standards Leadership (July 2005)
Standards Blog:	Avoiding a New Dark Age (June 2004)
Trends:	The Web and the Advent of "Superintegration/Creation (June 2005)

PART FIVE:

THE (LESS) SERIOUS SIDE

OF

STANDARDS

Chapter Ten:

THE LIGHTER SIDE OF STANDARDS

Standards suffer from what might be described as an image problem. Bring up the topic of technical standards with most people, and one of two (and usually both) reactions will predictably follow: a blank stare and gradually lowering eyelids.

And yet that's not the way it has to be. Standards as such may be dry as dust, but how they are created, who used them, and how they are deployed in the field can be quite interesting, and sometimes comic. Some years ago, I added a section to the ConsortiumInfo.org site that I called Consider This, which I dedicated to writings on a philosophical, and sometimes whimsical, note. Those in the latter category have covered everything from various Dark Sides of the Internet, to the flatness of Kansas as compared to pancakes, to an imagined Creation 3.0, to the four selections that you will find below.

The first article in this chapter combines the philosophical and the whimsical, reflecting on the potential for the Wikipedia, that poster child for all on-line community collaborations, to replace archaeology. But it also introduces you to the inimitable Spoon Man.

The second selection will take you behind the scenes at the National Institute of Standards and Technology to the place where you – yes you – can order precise reference materials such as Equal Atom Lead, Organics in Whale Blubber, or the ever popular Non-Newtonian Polymer Solution for Rheology – Polyisobutylene Dissolved, *whether* for your personal use or to complete your holiday shopping. It's really up to you.

Next, there's the tale of my outing as popular London Guardian columnist and BBC Radio 4 personality Simon Hoggart by alert reader/blogger Jon Levell. As Whole Foods CEO John Mackey could have profitably learned from my example, the Internet is no place to hide, even with an alias.

And in the final selection, I explore the impact that the supersizing of Americans has had on body type standards, and the products that are built using them, from cars to sleeping bags – including Big Agnes.

Enjoy!

Selections:

Consider This: The Wikipedia and the Death of Archaeology (October 2006)

Standards Blog: For Your Reference (June 2005)

Consider This: Objectivity and my Secret Life as Simon Hoggart
(January 2006)

Consider This: Body Type Standards, Crash Test Dummies, and Sleeping with Big Agnes (February 2006)