



Attorneys at Law

Consortium Standards Bulletin

A ConsortiumInfo.org publication

January 2005

Vol IV, No. 1

FEATURE ARTICLE

A WORK IN PROGRESS: GOVERNMENT SUPPORT FOR STANDARD SETTING IN THE UNITED STATES: 1980 – 2004

Andrew Updegrove

Abstract: *The United States government has historically not taken an active interest in supporting the development of voluntary consensus standards, or making use of them in its own purchasing. In the last two decades of the twentieth century, Congress passed several pieces of legislation that reversed this position. This article reviews the benefits that Congress sought to achieve in so doing, the agencies that they charged with administering and complying with the new legislation, and the regulatory and other activities undertaken to achieve those goals.*

Introduction: As standards became more integral to society in the last century, many governments around the world demonstrated increasing interest in how these useful tools are created, deployed and utilized. In some areas that the State has traditionally regarded as its rightful domain, such as health and safety, governments have assumed the dominant role by setting regulations having the force of law. But in technical sectors, most national governments have allowed the private sector to play the greatest role in the creation and deployment of standards. The specific venues and mechanisms for doing so vary from country to country, but in each case, the practice of standard setting is encouraged by the host government.

The reasons for welcoming the assistance of the private sector are several. Economically, it is well recognized that “standardization has significant consumer benefits in many markets.”¹ Standard setting serves to “increase price competition,” “increase compatibility and interoperability, allowing new suppliers to compete,” and “increase the use of a particular technology, giving the installed base enhanced economic and functional value.”²

Moreover, due to technological advances the modern world has become increasingly in need of a rapidly expanding volume of standards, particularly in the areas of computer information and communications technology (ICT). Even were governments to become interested in playing the leading role in creating such standards, the demands of achieving that goal would outstrip currently available public resources. As importantly, a degree of international cooperation and consensus is required to produce timely ICT standards is not otherwise rapidly achievable through existing government institutions.

The result has been the evolution of a largely private sector *global standard setting infrastructure* that is as extensive as it is invisible to those not directly involved. This infrastructure includes the officially recognized national standards organizations of the 146 countries that together comprise the membership of the International Organization for Standardization (ISO)³ (one of several such global organizations), as well as the hundreds of domain-specific standards development organizations (SDOs) that they have accredited. Finally, there are many hundreds of unaccredited organizations, most often referred to as “consortia”, several of which are formed almost every week.⁴

It is estimated that SDOs maintain an incredible 780,000 (or more) official, nationally adopted standards.⁵ Consortia create thousands more standards that also achieve national or global adoption, particularly in the areas of information and communications technologies.⁶

Although standards are primarily created by these private-sector organizations of various types, governments nonetheless recognize that standards have a broad range of benefits to society. Governments also realize that the creation of standards may require not only legislative assistance, but regulatory forbearance at times as well. For example, the creation of standards by its nature involves cooperative activity among competitors, which might otherwise normally be viewed by antitrust regulators purely with suspicion. Instead, governments have come to recognize that such action may instead have significant offsetting pro-competitive benefits, such as increasing price competition among comparable products, and broadening consumer choices.

At the same time, while the benefits of standards are widely recognized by governments, so also are the potential dangers of improper conduct by standard setting participants. By their very nature, standards setting activities that are closed and collusive rather than open and impartial can discourage or even eliminate competition, giving rise to antitrust concerns. In their role as regulators, governments therefore have a duty to police standard setting in order to prevent abuse of the process. As a result, federal agencies in the United States and elsewhere have often taken an active role in applying antitrust and other commercial laws to the standard setting environment, but in a balanced fashion that takes into account potential benefits as well as risks.⁷

Governments also now realize that nations that are leaders in developing standards may often thereby gain competitive advantages abroad. More generally, regardless of their point of origin, globally accepted standards are fundamental to the expansion of international trade, widening the availability of foreign markets for domestic products.

In addition to recognizing the economic benefits of standard-setting activities for their private and commercial constituencies, governments also have an interest in standard setting as consumers in their own right. As the purchasers of enormous quantities of goods and services, governments therefore share with other end-users a desire to make purchases from a wide variety of high quality, price-competitive, interoperable alternatives.

While the government of the United States has hardly been as involved or interested in fostering the creation and utilization of standards as (for example) the European Union or China, it has become more actively engaged on the topic in recent times than previously. In this article, we survey the most significant initiatives taken by the United States federal government since 1980 in order to encourage the continuing operation of a healthy and effective standard-setting process in the United States.

The Basis for Increasing Government Involvement

Over the past two and half decades, the United States federal government has come to realize that federal facilitation of the creation and utilization of voluntary consensus standards is important to the U.S. economy. However, this realization was slow in forming. Consistent with the overall American bias towards private action and a free market economy, the U.S. government's historical attitude towards standards development has largely been one of detachment. Indeed, in areas such as purchasing, the creation of "government specific" requirements in contracting rather than utilizing already existing voluntary consensus standards was the norm rather than the exception.

At the same time, since the courts were periodically called upon to consider what outcomes should obtain when disputes arose between those who participated (or occasionally were barred from participating) in standard setting organizations, Congress was in a unique position to assist or hinder the process of standard setting. This was especially so in its role as promulgator and enforcer of the antitrust laws.

With the increasing globalization of trade, the use of standards to erect trade barriers also became an increasingly troublesome issue and, as a result, industry in the United States (as in other countries) looked to government to help solve a problem that could only be addressed at that level. Finally, increasing challenges to American technology leadership by foreign companies coincided with the tenure of the Reagan government. The laissez-faire business policies of that administration helped create an atmosphere that was more conducive to the passage of legislation intended to make American manufacturers more competitive internationally.

Most recently, a new wave of events and needs has pushed standards and standard setting to the forefront of governmental attention. As an example of the former, the decision by China in 2003 (intended to take effect in June of 2004) to require compliance by wireless chip manufacturers with its own domestic standards resulted in direct intervention by the United States at the highest diplomatic levels before China backed down.⁸ And as an example of the latter, the United States Department of Defense has committed itself to convert to a “network centric” operations model, a massive ICT effort targeted at making all information from every source in the field available to all participants, from battlefield commanders to the Joint Chiefs, and throughout allied forces and Homeland Security as well. Such an effort is only achievable through the utilization of a myriad of interoperability standards. An example of both event and need arose on September 11, 2001, when the urgent need for hundreds of new enabling security and communications interoperability standards suddenly became apparent.

In short, the United States government is becoming increasingly aware of the essential role that standards play at every remove, from commerce, to purchasing, to Homeland Security, to its very ability to perform its appointed functions.

Legislation

Even before President Reagan took office, uncertainty over the application of the antitrust laws to joint development activities led to the publication in 1980 by the Department of Justice of a set of Antitrust Guidelines for Collaborations among Competitors.⁹ This publication was intended to facilitate the positive aspects of collaborative processes by giving guidance to the parties involved in joint research projects conducted by market competitors. Unfortunately, fear of liability for the substantial penalties provided under the antitrust laws (i.e., treble damages to successful private plaintiffs) still had a chilling effect. In effect, such high potential penalties provided incentives to watchful competitors to bring spurious charges for strategic reasons as well as to initiate justified lawsuits.

The NCRPA. These concerns attracted particular notice in Congress in the 1980s, when “Japan Inc.’s” collaborative industry approach was popularly identified as one factor behind its apparent ability at the time to out-compete U.S. industry in important technology areas such as semiconductor production. In an attempt to allay the fears of U.S. companies over engaging in similar collaborative efforts, Congress passed the National Cooperative Research Act in 1984.¹⁰

This Act was subsequently amended to expand its protective umbrella to cover certain types of joint development activities, and was appropriately renamed the National Cooperative Research and Production Act of 1993 (“NCRPA”).¹¹ In its 1984 and 1993 versions, the NCRPA attempted to clarify how U.S. antitrust laws apply to joint ventures, and sought to encourage joint research and development through significantly reducing the penalties for missteps that might occur in the course of such activities.¹² Specifically, antitrust violations involving activities within the ambit of the NCRPA would bear a maximum penalty of actual, rather than treble, damages, provided that the joint venture had timely filed a simple, no-fee notification with the U.S. Federal Trade Commission (FTC) and Department of Justice (DOJ).¹³

While the NCRPA did not make specific mention of standard setting, it was widely used by consortia that were formed after passage of the Act to provide protection with respect to those activities that might fall within its scope. However, the NCRPA had several shortcomings that limited its usefulness to the standard setting community generally. First, it is difficult to know under the general language of the NCRPA exactly what types of standard setting and related activities would be entitled to protection (e.g., would or would not the development of standards or reference software, or the creation and implementation of certification tests, be protected?) Similarly, collaborating parties could only achieve protection if a filing was made within 90 days of the formation of a joint venture.¹⁴

As a result, pre-existing standard setting organizations (“SSOs”), whether SDOs or consortia, were ineligible to seek protection. Still, many consortia formed after the effective date of the original Act did take advantage of the opportunity to comply, due to the ease with which protection (to whatever greater or lesser percentage of the activities such protection might apply) could be secured.

This situation changed dramatically on June 22, 2004, when the second President Bush signed a little-noticed piece of legislation into law entitled the “Standards Development Organization Advancement Act of 2004”¹⁵, which amended the NCRPA for a second time. The purposes of the amendment were two-

fold: first, to specifically cover standard setting, and second, to provide a 90-day window during which existing SSOs could seek protection under the Act.¹⁶ Unfortunately, there was a third element to the amendment that gave up more than was gained: while existing unregistered SSOs could now achieve protection under the NCRPA, their members would be barred from obtaining similar benefits. This led to the anomalous result that even though private parties engaged in any other type of activity protected by the NCRPA could continue to enjoy its benefits, participants in the generally more benign and well-respected process of standard setting could not. Thus, while a gain was provided to existing, unregistered standards bodies, members of later-formed (and perhaps even existing) standards setting consortia regrettably lost a valuable preexisting right.¹⁷

The NTTAA and OMB Circular A-119: Congress more directly acted to bolster the private development of standards through its passage of the National Technology Transfer and Advancement Act of 1995 ("NTTAA").¹⁸ Unlike the NCRPA prior to its most recent amendment, the NTTAA explicitly promotes voluntary consensus standards for regulation and procurement by the U.S. government.¹⁹ Historically, the government preferentially used "government unique" standards in much of its purchasing, which often served to limit the number of bidding vendors, required custom manufacturing, and therefore often resulted in higher purchasing costs.

With the passage of the NTTAA, Federal agencies were required to use non-government unique standards whenever possible, and to actively participate in the activities of SSOs to facilitate the development of those standards. As a result, the most active Federal agencies in the United States now use hundreds, and even thousands, of SSO maintained standards, and are completing the task of substituting SSO and other non-government standards for pre-existing government and agency-specific standards.²⁰ In order to coordinate such compliance with the NTTAA, the Interagency Committee on Standards Policy was formed.

In 1998, the Office of Management and Budget (OMB) updated its already issued Circular A-119 to provide additional guidance to the Federal agencies on implementing the NTTAA.²¹ The National Institute of Science and Technology (NIST) has reported that through 2001, Federal agencies had replaced at least 1,412 government unique standards with non-government standards, and also used thousands of additional non-government standards. NIST also reported that in 2001, Federal agencies actively participated in at least 847 separate standard setting activities, and collectively were known to still utilize only 54 government unique standards. The five Federal agencies that use the largest numbers of standards (Department of Energy, Health and Human Services, Housing and Urban Development, Department of Transportation and the National Aerospace and Science Administration) collectively utilized over 3,071 voluntary consensus standards in their procurement activities, and had directed 1,270 of their employees to participate in the activities of SSOs.²²

Other Standards-Related Legislation and Agency Action: Further to the purpose of the NTTAA, Congress has passed other laws that were not primarily directed at supporting standards, but which contain provisions consistent with the intention of the NTTAA. These include:

- **The Telecommunications Act of 1996:**²³ This Act encourages the Federal Communications Commission to use privately developed standards that have been developed through an open and consensus-based process.
- **The Consumer Product Safety Act:**²⁴ Pursuant to this Act, the Consumer Product Safety Commission is required to rely on privately developed voluntary consensus consumer product safety standards.
- **The Health Insurance Portability and Accountability Act of 1995:**²⁵ This legislation requires that the Secretary of Health and Human Services adopt standards developed by ANSI-accredited standards developers if at all possible.
- **The Food and Drug Administration Modernization Act of 1997:**²⁶ Under this Act, the FDA is allowed in some circumstances to accept manufacturers' declarations of compliance with privately developed standards during the FDA's evaluation of electrical medical devices.

Enforcement

Government policy in the United States is actively implemented and enforced by a variety of agencies, as well as binding (as to purchasing) on all agencies. The principal agencies involved in policies relevant to standard setting are:

Antitrust Division of the Department of Justice: The Antitrust Division of the DOJ shares responsibility for enforcing the US antitrust laws and regulations with the Bureau of Competition of the FTC.²⁷ The Antitrust division states its mission to be the promotion and protection of the competitive business process and the American economy through antitrust law enforcement.²⁸ The Division prosecutes violations of the antitrust laws in virtually all industries and levels of business, including manufacturing, transportation, distribution and marketing by bringing criminal suits or leading civil suits against offenders.²⁹

Federal Trade Commission: As noted, the Bureau of Competition of the FTC shares responsibility for enforcing the US antitrust laws and regulations with the Antitrust Division of the DOJ.³⁰ The Bureau is a consumer protection agency mandated by the FTC Act to protect the marketplace from unfair methods of competition, and to prevent unfair or deceptive acts or practices that harm consumers.³¹ The Bureau has authority to file cases in both federal court and special administrative forums.³²

These agencies bring actions against offenders of their own accord, but also often intervene as a result of situations brought to their attention by private parties.³³

Facilitation

Other branches of the Federal government have also taken action to facilitate standard setting by SSOs. After passage of the NTTAA, the Department of Defense "privatized" thousands of existing government unique standards in areas such as aerospace and electronics by allowing individual SDOs to take over the further maintenance and updating of these standards.

In addition to the laws that relate to standard setting activities, several federal agencies have been designated to represent the U.S. government in the standards development process. Chief among them is the National Institute of Standards Technology (NIST).

Founded in 1901, NIST is a non-regulatory federal agency within the U.S. Commerce Department's Technology Administration. It states its mission as developing and promoting measurements, standards, and technology to enhance productivity, facilitate trade, and improve quality of life.³⁴ NIST has four major programs - the NIST Laboratories, Advanced Technology Program, Manufacturing Extension Partnership and the Baldrige National Quality Program - through which it works with U.S. companies, universities, and numerous other organizations to build critical US technical support system infrastructure (of which standards are an essential part).³⁵

While not a part of the federal government, the American National Standards Institute (ANSI) is the recognized representative of the United States in several global standard setting venues. NIST has therefore often joined forces with ANSI to promote the voluntary consensus standards approach.

In addition to prosecuting process abusers, the FTC and DOJ also proactively assist commerce by clarifying the law when necessary by issuing relevant guidelines.³⁶ In order to assess the need for such advice, they also hold hearings to inform themselves of industry needs. In 2002, the FTC and Antitrust Division of the DOJ held extensive joint hearings on "Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy."³⁷ These sessions continued the agencies' inquiry into the implications of competition and patent law and policy for innovation and other aspects of consumer welfare by focusing on a number of topics central to the intersection of antitrust and intellectual property law.³⁸

Topics examined during these hearings included patent pools, cross-licensing, patent settlements, intellectual property strategies and license terms in standards activities, licensing strategies, antitrust analysis of licensing practices and an international comparative law perspective on the relationship between competition and intellectual property. On April 18th, 2002, the hearings focused on consortia and standard setting.³⁹

Most recently, the Department of Commerce issued a major report emphasizing the need for coordinated action to avoid the use of standards to erect trade barriers.⁴⁰

Summary

The United States being a democracy, the issues that motivate Congress are not unlike waves upon a shore; the emotions (or lobbying) that impel a bill through to adoption at times abate as rapidly as they arose. Sometimes, the legislation left behind turns out to be flotsam of transient relevance that is soon enough forgotten.⁴¹

But it is equally true that there are tides (as well as waves) in the affairs of governments. When wave follows wave to a single purpose through the administrations of both parties, then it is clear that there is a tide, and not a single, isolated wave of interest at work. So it would seem in the case of standard setting in the United States at this time.

While this writer would be surprised to see standard setting rise to the perceived level of strategic importance that it has achieved in the European Union, it seems equally clear that standards have achieved a level of legitimacy on the national stage and in the halls of government that is not likely to significantly abate, at least for the foreseeable future. Perhaps most significantly, the ability of government to function at all is increasingly dependent on the robustness of its own information and communications technology infrastructure. Of necessity, the Federal agencies will be increasingly mindful of the importance of standards, even if the attention of Congress flags.

Indeed, as the world becomes ever more interconnected, the role of standards will become ever more vital. Inevitably, the word "standards" will necessarily crop up in more and more agency and legislative contexts. Perhaps with sufficient repetition, the attention of government in the United States on voluntary consensus developed standards will be here to stay.

Comments? updegrove@consortiuminfo.org

Copyright 2005 Andrew Updegrove

¹ Lemley, Mark A., *Intellectual Property Rights and Standard-Setting Organizations*, 90 Cal. L. Rev. 1889, 1896 (2002).

² Balto, David A., *Standard Setting in the 21st Century Network Economy*, Computer and Internet Lawyer, Vol. 18, No. 6, 3 (Jun. 2001).

³ ISO, *ISO In Figures* (Jan. 2003)

<<http://www.iso.ch/iso/en/aboutiso/isoinfigures/archives/January2003.pdf>>.

⁴ For the most complete list of such organizations currently in existence, see ConsortiumInfo.org, Consortium and Standards List, at <<http://consortiuminfo.org/list/>>.

⁵ Toth, Robert B., ed., NIST, *Profiles of National Standards-Related Activities*, Spec. Pub. 912 (Apr. 1997).

⁶ See Consortium and Standards List, *supra*.

⁷ For an exhaustive review of United States antitrust and other laws, regulations and case holdings related to standard setting, with links to cited cases, regulations and statutes, see ConsortiumInfo.org, Laws, Cases and Regulations, at <<http://consortiuminfo.org/laws/>>.

⁸ Updegrove, Andrew, *Breaking Down Trade Barriers: Avoiding the China Syndrome*, ConsortiumInfo.org, Consortium Standards Bulletin, Vol. III, No. 5, May 2004, pp. 8-11, at <<http://www.consortiuminfo.org/bulletins/may04.php#trends>>.

⁹ FTC and DOJ, Antitrust Guidelines for Collaborations Among Competitors (Apr. 2002), available at <<http://www.ftc.gov/os/2000/04/ftcdojguidelines.pdf>>.

¹⁰ National Cooperative Research Act of 1984, 15 U.S.C. §§ 4301-4306 (1984).

¹¹ National Cooperative Production Amendments of 1993, 15 U.S.C. § 4306 (1993); National Cooperative Research and Production Act of 1993, 15 U.S.C. §§ 4301-4306 (1984).

¹² 15 U.S.C. §§ 4302, 4303.

¹³ 15 U.S.C. § 4303.

¹⁴ 15 U.S.C. § 4305.

¹⁵ Standards Development Organization Advancement Act of 2003, Pub. L. No. 108-237, 118 Stat. 661 (2004).

¹⁶ Standards Development Organization Advancement Act §§ 103, 107.

¹⁷ The impact of the House Bill 1086 (as the 2004 amendment of the NCRPA was internally designated), on existing and future consortia is unfortunately quite murky. For a detailed analysis see Updegrove, Andrew, *What Does 1086 Mean to Consortia?* ConsortiumInfo.org, Consortium Standards Bulletin, Vol. III, No. 6, June 2004, 8-12, at <<http://www.consortiuminfo.org/bulletins/jun04.php#update>>.

¹⁸ National Technology Transfer and Advancement Act of 1995, 15 U.S.C. § 3701 (1995).

¹⁹ *Id.*

²⁰ OMB, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities, Circular A-119, Revised (Feb. 10, 1998), available at <<http://www.whitehouse.gov/OMB/circulars/a119/a119.html>>.

²¹ *Id.*

²² Kevin McIntyre and Michael B. Moore, NIST, Fifth Annual Report to the Office of Management and Budget on the Implementation of Public Law 104-113 and OMB Circular A-119 (Oct. 2002).

²³ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996), available at <<http://www.fcc.gov/Reports/tcom1996.txt>>.

²⁴ Consumer Product Safety Act, 15 U.S.C. §§ 2051-2058, 2060, 2061, 2063-2085 (1972).

²⁵ Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, 100 Stat. 1936 (codified in scattered sections of 18 U.S.C., 26 U.S.C., 29 U.S.C., and 42 U.S.C.).

²⁶ Food and Drug Administration Modernization Act of 1997, Pub. L. No. 105-115, 111 Stat. 2296 (codified in scattered sections of 21 U.S.C. and 42 U.S.C.).

²⁷ FTC, Bureau of Competition, Overview, available at <<http://www.ftc.gov/bc/mission.htm>>.

²⁸ DOJ, Antitrust Division, Overview, available at <<http://www.usdoj.gov/atr/overview.html>>.

²⁹ *Id.*

³⁰ FTC, Bureau of Competition, Overview, available at <<http://www.ftc.gov/bc/mission.htm>>.

³¹ *Id.*

³² Currently, the FTC is prosecuting Rambus Incorporated with respect to its allegedly fraudulent behavior in an SSO. For ongoing coverage of this case and related proceedings among private parties see *multiple articles to be found at* ConsortiumInfo.org, Consortium Standards Bulletin Cumulative Index, at <<http://www.consortiuminfo.org/bulletins/>>.

³³ FTC, Bureau of Competition, Overview, *available at* <<http://www.ftc.gov/bc/mission.htm>>.

³⁴ NIST, General Information, *available at* <http://www.nist.gov/public_affairs/general2.htm>.

³⁵ Relevant NIST publications include the following:

- Maureen A. Breitenberg, NIST, The ABC's of Standards-Related Activities in the United States (1987), *available at* <<http://ts.nist.gov/ts/htdocs/210/ncsci/stdpmr.htm>>.
- Breitenberg, Nat'l Bureau Standards, The ABC's of Certification Activities in the United States (1988), *available at* <<http://ts.nist.gov/ts/htdocs/210/ncsci/cerprime.htm>>.
- Breitenberg, NIST, The ABC's of the U.S. Conformity Assessment System (1997), *available at* <<http://ts.nist.gov/ts/htdocs/210/ncsci/primer.htm>>.
- Breitenberg, Dep't Commerce and NIST, Laboratory Accreditation Activities in the United States (1991), *available at* <<http://ts.nist.gov/ts/htdocs/210/ncsci/primer1.htm>>.
- Breitenberg, NIST, The U.S. Certification System from a Governmental Perspective (1997), *available at* <<http://ts.nist.gov/ts/htdocs/210/ncsci/govcer.htm>>.
- NIST, Standards Coordination and Conformity Group, Acronym List, *at* <<http://ts.nist.gov/ts/htdocs/210/gsig/acro1.htm>>.
- NIST, Guidance on Federal Conformity Assessment Activities, 15 C.F.R. § 287 (2000), *available at* <<http://ts.nist.gov/ts/htdocs/210/gsig/caguidance.htm>>.
- Directory of U.S. Private Sector Product Certification Programs, NIST Special Publ'n 903 (2001 ed.), *available at* <<http://ts.nist.gov/ts/htdocs/210/gsig/cainfo.htm>>.

³⁶ See *infra* note 2 and accompanying text.

³⁷ See *generally*, FTC, Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy, *at* <<http://www.ftc.gov/opp/intellect/>>.

³⁸ See *infra* note 37.

³⁹ For multiple papers submitted and transcribed testimony given on April 18th, 2002, see <<http://www.ftc.gov/opp/intellect/index.htm>>.

⁴⁰ Dep't Commerce, Standards and Competitiveness – Coordinating for Results: Removing Standards-Related Trade Barriers through Effective Collaboration (May 2004). For a detailed analysis of the report see Updegrove, Andrew, *U. S. Department of Commerce Delivers a Major Standards Report*, ConsortiumInfo.org, Consortium Standards Bulletin, Vol. III, No. 6, May 2004, 4-8, *at* <<http://www.consortiuminfo.org/bulletins/may04.php#feature>>.

⁴¹ As an example, the NCRPA has never been widely utilized, relative to the number of joint ventures that might have taken advantage of its existence.