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Strategic Standard Setting on the Global Stage ASSOCIATION MANAGEMENT, August 2004

By: *Donald E. Purcell*

New players in global trade may be quietly shifting the center of gravity for international standard setting. An expert in standards analysis explains the implications and provides some tips for association leaders.

According to the Congressional Office of Technology Assessment (OTA): "Standards generally go unnoticed. They are mostly quiet, unseen forces, such as specifications, regulations, and protocols that ensure that things work properly, interactively, and responsibly. How standards come about is a mystery to most people should they even ponder the question."

And yet, standards are like DNA; they are the basic building blocks for all technology and economic systems. Standards apply to and cover all products and services in commerce. Consider, for example, the benefits and functionality of standards as described in a report, "The ABCs of Standards-Related Activities in the United States," of the National Institute for Standards and Technology and summarized as follows:

Standards provide benefits such as improving the quality of life; defining accurate and necessary measurements; lowering product costs; improving product performance, quality, uniformity, interoperability, and functionality; and providing a method to improve health, safety, the environment, communication, competition, and international trade.

While the OTA definition makes it clear that it is rare for people to pay much attention to standards unless they happen to be engaged in the development of a particular standard, some pay a great deal of attention to them. For example, in his book *Business @ The Speed of Thought: Succeeding in the Digital Economy* (2000, Warner Books), Bill Gates, founder and CEO of Microsoft, discusses the concept of "Windows DNA" (Windows distributed Internet architecture). It is one of the best discussions of standards and the strategic value of global standards in print today. If you are looking for an example of "the power of one standard," you will be hard pressed to improve on the strategic implications of Windows DNA as a straightforward, simple, and powerful standards concept that has contributed significantly to Microsoft's success as one of the most powerful corporations in the history of the world.

The past couple of years have seen some new players emerge in the standards arena--China, Japan, and South Korea among them. A joint venture created by these countries in 2003--focused on strategic coordination in the development of international standards and university standards education programs--signals a potential shift in the epicenter of international standard setting. It and other activities related to

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international standards bear careful observation.

This article's purpose is to get the issue of international standards on your association's radar screen. How you interpret the issue and whether your association should respond is, of course, up to you. Keep in mind, however, that this issue reminds me of the commercial in which a mechanic holds up an oil filter and remarks, "You have a choice: You can either purchase the filter now or a new engine later."

Historic overview and current realities

Standards have existed for thousands of years and are among the most important building blocks for all national economies and for the world economy. For example, the Organization for Economic Cooperation and Development estimated in 1999 that technical standards and regulations directly affect more than 80 percent of world product trade, which at that time exceeded \$4 trillion.

The United States has the largest, most diversified standards system in the world, with literally hundreds of national standards committees and consortia that work diligently to maintain private sector voluntary consensus standards for every industry in the United States. The standards system works from the bottom up, with consensus standards developed by the private sector and the government playing a sizable but supporting role. All other national standards systems around the world work from the top down, with governments playing a major role in each respective standards system. While resulting standards remain voluntary, in practical effect, the standards are quasi-government standards.

At the global level, the Institute of Electrical and Electronic Engineers, New York City, estimates that more than 500,000 standards exist in the world today, and that it takes approximately \$1.5 billion annually to maintain these standards and develop new ones. To the extent that the global economy continues to develop and take center stage, it will be critical to develop and maintain a strategic standards infrastructure to support the global economy.

International and economic implications

Meanwhile, there is no precise definition of an international standard. For example, although the World Trade Organization was created to facilitate and regulate international commerce, and has an entire section of its charter dedicated to resolving international technical (standard) trade barriers, the term *international standard* is not defined in the WTO agreement. Instead, the WTO defines an international standard to be a standard that meets the following process principles: transparency, openness, impartiality and consensus, effectiveness and relevance, coherence, and development dimension. In short, the WTO relies on "development process" criteria to define an international standard.

The WTO's effort to define an international standard according to principles of process is a legitimate goal. Managing that development and use of international standards is, however, likely to become more and more complex and will provide a competitive edge to nations and organizations that have the resources to remain involved during an entire international standards development project. Some projects will take years to complete and will come with hefty price tags.

Nevertheless, the economic implications for international standards are huge. Nations and organizations such as associations must remain involved in the development of international standards to guarantee their respective futures. It's that important.

Given the economic realities of global commerce, association executives should consider the following questions:

1. Are international standards relevant to my association's activities?
2. Have we studied the standards of our industry from a strategic point of view?
3. If international standards are relevant to our association's agenda, what are we doing to manage this key issue on a strategic level?
4. If we decide to become involved in developing an international standard for our industry, do we have the resources to stay the course?

Realities of global governance

In general, the world's economy is governed by three spheres of influence that are in a constant state of interaction: 1) a dynamic marketplace where fortunes can be made and lost in a single day; 2) standards development organizations and consortia that develop consensus international standards; and 3)

governments functioning at the local, state, national, and international levels. Each distinct sphere of influence is critical, and international standards play a particularly critical role. As stated by W. Edwards Deming in *Out of Crisis* (1986, Massachusetts Institute of Technology): "If you control an industry's standards, you control that industry lock, stock and ledger."

To appreciate the potential impact of international standards, consider the following example. Seeking to change the strategic landscape at the global level, China announced in January 2004 that it would create its own standard for encryption software and require companies to coproduce their goods with Chinese companies, while at the same time China targets the world market for these products. The plans were reported in *The New York Times* article, "China Poses Trade Worry as It Gains in Technology," January 13, 2004. The story quotes Phillip J. Bond, undersecretary of commerce for technology, as stating: "Standards have become the new [international] battleground."

In the article, association executives expressed significant concerns with China's strategic intentions. Bruce P. Mehlman, executive director, Computer Systems Policy Project, commented: "Will [China] take a more global, market-based approach, or will it try to change the rules and disadvantage others?" Ann Rollins, director of technology and trade policy, The Information Technology Industry Council, remarked: "Having a different standard from the rest of the world fractures the market...the implications of this are dangerous going forward."

With regard to its plans to impose its own standard for wireless technology, in April 2004, China announced that it would indefinitely postpone its plan to impose the standard because of significant protests from the United States and other nations. But we probably haven't heard the end of this.

Opportunities to play a role

Given these incidents, should your association be ready to embark on a global lobbying campaign to influence a particular international standard that otherwise would be adverse to your members' interests? Is your association ready for a global marketplace where international standards are the new battleground?

With so much at stake, I suggest two major areas in which the United States has opportunities to take action that will strengthen its influence on developing international standards--academic institutions can promote standards education, and associations can lead the way in international standard setting in the industries that they represent.

The academic front

If international standards are so important, you'd think that they would be the focus of extensive analysis at schools of engineering in the United States. After all, the global economy is being driven by technology at virtually every turn, and engineers are frequently in a leadership position when technology issues are being resolved.

In fall 2003, the Center for Global Standards Analysis, Washington, D.C., conducted a survey of schools of engineering at the top 100 universities in the United States to determine the extent of standards education included in their curricula. The survey report published in March 2004 (see engineering.cua.edu/StandardsCenter/center_for_global_standards_anal.htm.) revealed two major findings:

1. Standards education is not a priority issue among schools of engineering in the United States.
2. Schools of engineering in the United States do not accept the critical nature of standards in the new 21st-century global economy.

In its survey, the center was able to identify only three schools of engineering in the United States that currently have a course on standards education: 1) Catholic University of America, Washington, D.C.; 2) the University of Colorado, Boulder; and 3) the University of Maryland, College Park. Clearly, the future leaders of the United States are currently attending colleges and universities. Because technology continues to be a major influence in all economic systems, engineers will play a critical role in shaping the nation's economic future. If engineers do not learn the strategic fundamentals of international technology standards while in school, the cost of learning these fundamentals after the academic experience may be more expensive than the United States can afford. In its report, the Center for Global Standards Analysis recommended that schools of engineering in the United States reconsider giving priority attention to standards education.

It should be noted that the U.S. approach to standards education among schools of engineering is similar to that in the European Union. The EU maintains an index of all of its universities that conduct standards research or provide standards education programs. Very few EU schools of engineering offer a standards education program in their curriculum. In fact, a greater number of standards education programs exist within the schools of economics and business at most EU universities that have standards education programs. The development of international standards is a multidisciplinary experience, and hence standards education should reflect that by involving not only engineering, economics, and business, but science, trade, politics, and law. Going forward, these academic disciplines should be combined in a single course to provide a multidisciplinary approach to education concerning development of international standards.

The academic world's perspective on standards education, however, may be about to change--and well it should. If so, the change will be driven by competition from universities around the world. Consider, as alluded to earlier, that in 2003, China, Japan, and South Korea entered into a strategic joint agreement to coordinate development of standards and standards education activities. (See the Korean Standards Association's report on "Standards Education in Korea," presented at the International Workshop to Develop a Standardization Education Model, November 2003.) Equally important, the China Institute of Metrology, Beijing; Hanoi National Economics University, Vietnam; Institute of Technology, Bandung, Indonesia; and the University of Moratuwa, Sri Lanka; established a joint program with the University of Federal Armed Forces, Hamburg, Germany; and Erasmus University, Netherlands; to create a course for a master's degree curriculum based upon an Internet e-learning platform. If this project is successful, it will be the first academic program in the world to provide a degree program specifically dedicated to global standards. Taken together, these events may have profound consequences for global trade. It is possible that this new joint venture may create a new center of gravity in Asia to counterbalance international standards activities in the United States and Europe. At a minimum, it will provide a new level of competition for them.

It seems clear that countries that make development of international standards a top national priority in the field of education will wield more influence on the development of those standards.

Meanwhile, on May 3, 2004, a headline in the *The New York Times* read, "U.S. Is Losing Its Dominance in the Sciences." Is it not reasonable to conclude a similar result may occur in the development of international technology standards?

Keeping standards on the association radar screen

In the 21st century, associations must be able to provide early warning for their membership concerning the potential impact of international standards, because, as the United Kingdom's *National Standardization Strategic Framework* points out: "Standards influence everything we do." It's as simple as that--and as complex. Associations have a continuing due diligence role in knowing if any developing international standards will adversely affect their members.

Two interesting questions put to your association can be a starting point for considering the impact of international standards:

- What international standards may influence the industry or group that your association represents?
- Has your association considered participating in the development of these international standards?

If no international standards currently affect your association's agenda, rest easy for today--but don't forget about tomorrow.

In the final analysis, your association is the nationally or internationally recognized expert representing an industry or group, and only your association can determine whether any international standards currently affect the association's agenda, or may soon do so in the future.

If your association leadership has not yet initiated an analysis of international standards and their potential effect on your industry, consider the following five action items as starting points:

- 1. Form an ad hoc committee of the association's leadership to discuss the issue of international standards**

and determine whether this issue belongs on the association's agenda for strategic planning.

2. Once you've begun to explore the situation, conduct an *outside-the-box* discussion that focuses not only on the association's current priorities but on other links, relationships, and infrastructure issues directly related to the association's priorities.

3. Initiate not only a review of the association's priorities, but also consider other groups to which the association is naturally connected. What international standards issues are *these* industries or groups facing? If you discover that a closely related industry has significant international standards issues to deal with, consider what impact these issues may have on your association.

4. Consider the infrastructure needs of the association. Are any international standards issues currently affecting an industry or group that supplies the association with goods or services, and that may be adversely affected by international standards in the near future? Currently, several associations are engaged in development of international standards, particularly those representing communication, information technology, and the electrical and electronic industries. Should your association be doing the same for your industry?

5. If your association's review identifies any international standards issues, consider what response, if any, is necessary for your association to properly address these issues.

In the final analysis, it is your call and that of your volunteer leadership to determine what the value of an international standard means for the industry or group represented by your association. Make sure the association's radar equipment is in good shape and that international standards do not become a stealth issue--one that will come back to bite in terms of far-reaching consequences that create a negative impact on your association and the industry it represents.


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