

Standards Education and Research

– A Panel Discussion –

Moderated by

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- Why we are here . . .
 - To raise the awareness of standards of higher education faculty and students
 - To facilitate incorporation of standards into university curricula
 - To discuss the importance of educating the next generation of business leaders on the strategic importance of standards and conformity assessment
 - To highlight the impact of standards and the role of standards in education, communications and technology
 - To represent the American National Standards Institute (ANSI)
 - Volunteer members and staff of the ANSI Committee on Education

Agenda

- Introduction/Opening Remarks
- The Strategic Significance Between Education, International Standards and Trade
 - Donald E. Purcell, The Center for Global Standards Analysis
- The Emergence of Standards Research and Education
 - Timothy Schoechle, Ph.D, International Center for Standards Research
- Role of Standards in Education and Learning Technology
 - G.A. Redding, Institute for Defense Analysis
- Raising the Awareness of the Importance of Standards in Higher Education
 - Pamela Suett, American National Standards Institute

Definition of terms



■ Standard

- A formal agreement documenting generally accepted specifications or criteria for products, processes, procedures, policies, systems and/or personnel

■ Standardization

- Use of common products, processes, procedures, and policies to facilitate attainment of business objectives

Definition of terms

(continued)

- Conformity Assessment
 - A process whereby a product, process, service or system is evaluated against a standard



The World Trade Organization (WTO) fosters international trade based on, among others, conformity assessment practices that balance regulated public protection and heightened industrial competition

Types of standards



■ Voluntary Consensus

- Written in an open environment by professionals from both the private- and the public-sectors

■ De Facto (Ad Hoc)

- Usually developed outside the “traditional” standardization framework
- The marketplace determines the acceptance of a de facto standard

Types of standards

(continued)



■ Consortia Standards

- Developed by companies that agree to work together to solve a specific market need
- Participation is limited to members of the consortium
- A significant financial commitment may be required

■ Regulatory Specifications or Standards

- Written or adopted by government agencies

Standardization and conformity assessment impact all industries

- In the U.S. alone, there are more than 95,000 recognized standards. These encompass:
 - Product-Based Standards
(ISO film speed code; banking and telephone cards)
 - Performance-Based Standards
(Safety of wire ropes; safety of toys)
 - Management System Standards
(ISO 9000 Quality and ISO 14000 Environmental Management Systems)
 - Personnel Certification Standards
(financial planners; food protection managers; others)





*Mission: To enhance the global competitiveness of U.S. business and the American quality of life by promoting and facilitating **voluntary consensus standards** and conformity assessment systems and ensuring their integrity.*



ANSI's Educational Initiatives: Then and Now

- ANSI has been providing standards-related education services since it was founded in 1918
- A formal training program was established in the mid-1990's
- Today, ANSI's education initiatives are based in large part on guidance provided in the U.S. National Standards Strategy

National Standards Strategy for the United States (NSS)

■ Goal 11

Make the value of standards development both apparent and real by educating private- and public-sector decision-makers about the value of standards and how to take advantage of the process.

■ Action items for:

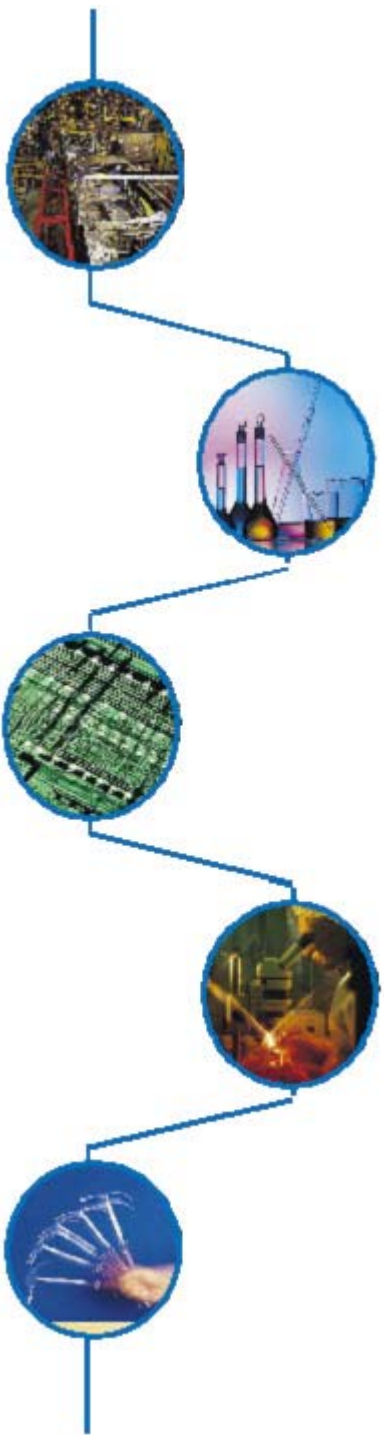
- ANSI
- Standards Developers
- Government
- All participants

TIP: A review and revision is now underway. *Input is welcome. This is your chance to help to shape the future.*

NATIONAL
STANDARDS
STRATEGY
FOR THE
UNITED STATES



Approved August 2000



The Strategic Relationships Between Education, International Standards and Trade

“Roughly 80 percent of global merchandise trade is affected by standards and by regulations that embody standards.”

Source:

National Institute of Standards and Technology
Testimony before the House Committee on Science, Subcommittee on Technology,
September 13, 2000

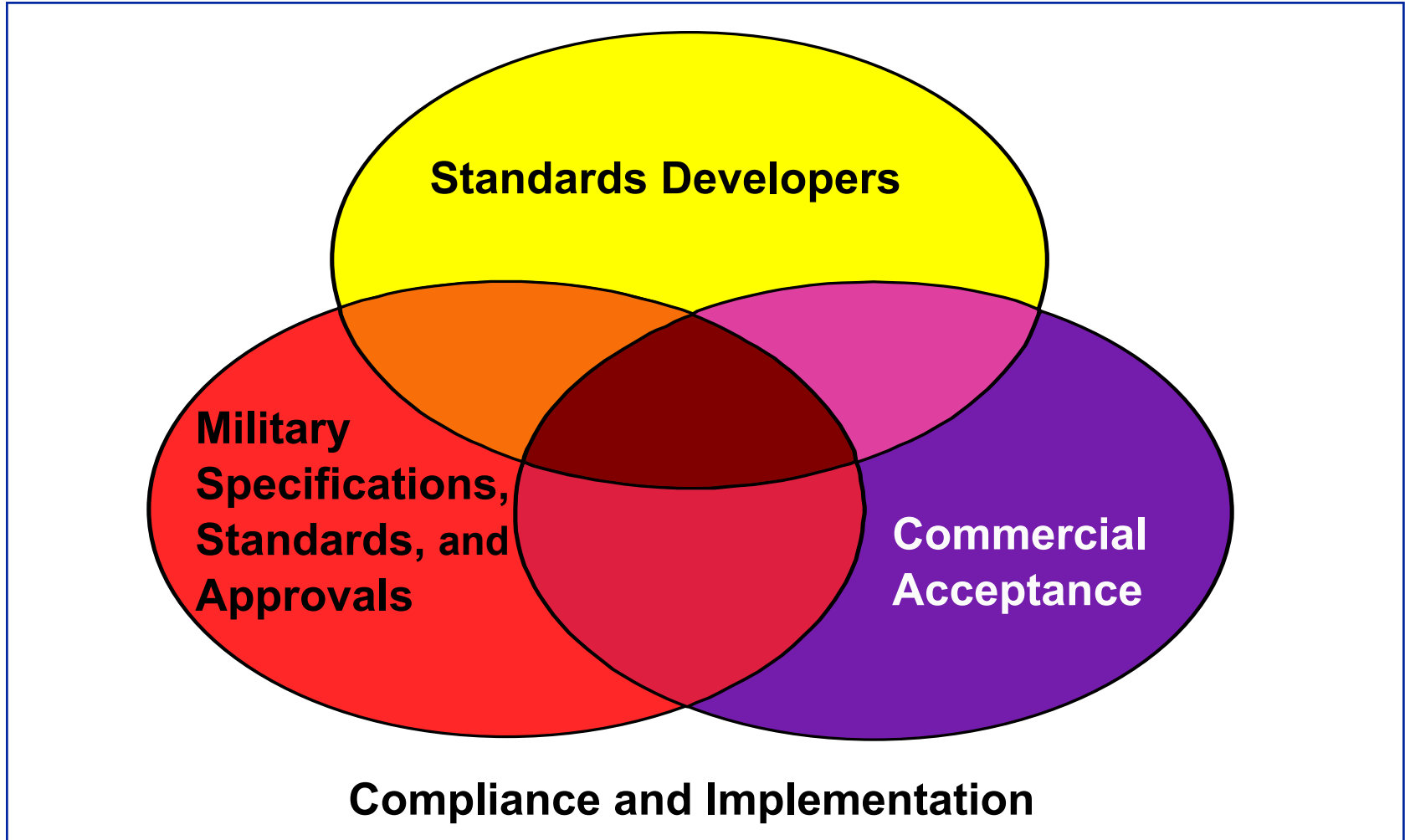
Standardization: A Global Objective



In a global marketplace, the objective of the standards development process must be a single, internationally recognized, technically valid standard that allows products to be distributed for commerce worldwide without change or modification.

One Global Standard Accepted by All

Standards Environment



One Standard – One Test Accepted Everywhere

- In order to participate in international trade — and to supply products and services to companies that participate in international trade — manufacturers will be required to demonstrate that their products conform to internationally accepted standards.
 - International standards (such as those produced by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC))
 - Other standards that are widely accepted internationally (e.g., ASME, ASTM, IEEE, NFPA)

- Most country-unique requirements will be seen as barriers to trade



Strategic Business Tools

■ Standards

- advance global trade in products and services
- promote quality assurance of products, personnel and systems
- enhance consumer protection
- enhance environmental protection



Marketplace Demand

■ Standards

- Break down barriers to trade
- Open markets and promotes competition
- Hasten the rate of implementation of new technology and reduces development costs
- Ensure multi-company industries and minimize sole sourcing
- Provide customers with freedom of choice
- Level the playing field and assure fair competition by requiring all suppliers to meet a common set of requirements
- Make possible applications, communications and connection compatibility and interoperability



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