

# National Technology Transfer and Advancement Act of 1995 (NTTAA)

signed into law on March 7, 1996







#### On the Cover

Coordination, Cooperation and Progress

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his year marks the tenth anniversary of the passage of the National Technology Transfer and Advancement Act (NTTAA), legislation that has had far-reaching benefits for the standardization community and the nation as a whole. The NTTAA compelled federal agencies to turn decisively to consensus-based, voluntary standards as alternatives to specifications that had previously been developed only for government use.

The streamlined approach to standards development and implementation central to the NTTAA has saved millions of dollars by using consensus standards for procurement purposes and mitigating overlap and conflict in regulations. During the last decade, tremendous progress has been made in the cooperative standardization efforts of industry and government. Significant accomplishments have been realized in critical areas such as health and safety, security and defense, protection of the environment, and technological advancement.

This Special Feature of the ANSI Reporter gives voice to the diverse experiences government agencies have had since the passage of the NTTAA and paints a picture of coordination, cooperation and progress.

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The ANSI Reporter (ISSN 0038-9676) is published quarterly. Members of the American National Standards Institute (ANSI) receive free subscriptions and online access (www.ansi.org/reporter). Paid subscriptions are available for non-members at an annual rate of \$100. Requests for permission to reprint should be sent to Editor, ANSI Reporter, c/o ANSI Communications and Public Relations Department.

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S. Joe Bhatia ANSI President and CEO

ne of the hallmarks of the U.S. standardization system is that its stakeholders are able to choose the method of standards development and the conformity assessment scheme appropriate for their particular needs. This market-driven and sector-based approach offers flexibility, efficiency and a responsiveness that is unparalleled in most other nations. It helps to bolster the global competitiveness of U.S. businesses. It helps to protect consumers and promote their health and safety. And it helps to safeguard our environment and keep our nation secure.

The continued strength of the U.S. standardization system depends upon the ongoing effective cooperation of the private sector and government. There is already a strong foundation upon which to build.

Prompted in part by the March 7, 1996, approval of the *National Technology Transfer and Advancement Act* (NTTAA), federal, state and local agencies have been increasingly turning to voluntary consensus standards as alternatives to agency-developed specifications. Office of Management and Budget (OMB) Circular A-119 guides federal agencies in their implementation of the NTTAA.

The principles of the NTTAA are closely aligned with the newly approved *United States Standards Strategy* (USSS). Both documents emphasize the advantages of government use of voluntary consensus standards that are developed in a diverse, cooperative and inclusive system that supports flexibility. In fact, several of the *Strategy's* initiatives specifically address the use of standards as tools for meeting regulatory requirements and how they can also serve as an integral part of a system that addresses national needs, threats and priorities.

As you will read in the following pages, agencies such as the U.S. Consumer Product Safety Commission, the U.S. Department of Defense, the Environmental Protection Agency, the National Aeronautics and Space Administration, and the Federal Communications Commission rely heavily on the use of private sector voluntary standards for acquisition, regulatory reform and conformity assessment.

In addition, ANSI's partnership with the government has never shown more strength, more progress, and more opportunity than it does today: 35 federal, state or local agencies are members of the ANSI Federation; their representatives participate in a broad spectrum of activities, including ANSI policy committees, national and international standards development committees—frequently in leadership positions—and as members of ANSI delegations to international meetings. The Institute's strong working relationships continue with the U.S. Department of Commerce and its agencies, the U.S. Department of State, the Office of the U.S. Trade Representative (USTR), and other federal agencies that partner with each other, with ANSI, and with others in the private sector on issues affecting U.S. competitiveness in the global marketplace.

As implementation of the USSS and the NTTAA continues, ANSI will encourage our fellow stakeholders to embrace initiatives that keep markets open and transparent, protect the environment, and enhance consumer health and safety. We will nurture existing partnerships around the globe and seek out new opportunities for cooperation, collaboration and harmonization that will lead to standards-based solutions for the good of our nation and our world. And we will continue to work with our members to create and implement various outreach programs to legislators, to increase understanding of the private sector standards community among agencies involved in trade and commerce issues, and to provide testimony when requested by legislative committees.

ANSI is dedicated to fostering an understanding of the major role standards play in the international and domestic marketplace among government leaders. We are also building a greater awareness of ANSI and its role in domestic and international standards development, and nurturing a broader appreciation of the contributions that the standards community makes to the economy and the public as a whole. The U.S. standardization system already serves industry, government and consumers well. Everyone needs to hear our success stories.

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James Turner technology policy specialist House of Representatives Committee on Science

**James Turner** has served as a member of the professional staff of the U.S. House of Representatives Committee on Science for more than 25 years. During his tenure, he has worked on numerous bills, reports, and hearings on a wide variety of topics. These include the international competitiveness of U.S. industry, environmental and energy research and development, trade and technology policy, intellectual property, standards, and technology transfer.

Mr. Turner was a key author and advocate of the National Technology Transfer and Advancement Act (NTTAA), and in this special issue of the *ANSI Reporter* he shares some of the history behind the Act and his perspective on the achievements it has wrought since its inception.

# TEN YEARS AFTER THE NTTAA: 1996-2006

**ANSI Reporter (AR):** As a key figure in the origination of the NTTAA, what was the driving force behind the drafting of the Act, and what were the expected benefits of its passage?

James Turner: ANSI was the organization that first introduced me and others on Capitol Hill to the merits of voluntary consensus standards, but the climate for change was set when in 1993 Secretary of Defense Bill Perry pushed hard to get the Department of Defense out of the MilSpecs business to the extent possible. This, in turn, required the Defense Department to rely much more heavily on voluntary consensus standards. It was obvious that these changes were increasing efficiency and saving money at the Department of Defense so we began examining the merits of bringing voluntary consensus standards to the fore at civilian agencies as well. What we hoped to accomplish was to have the public and private sectors joining together to develop and implement one set of ground rules for their commercial activities. We hoped that this would lead to easier, faster, less expensive procurements and to regulations that were grounded in the consensus best practices of the private sector.

**AR:** Who were some of the other partners that worked to move the NTTAA forward? What would you say was the nature of our legislators' understanding of standards ten years ago, and how has this changed?

**Turner:** Former Technology Subcommittee Chairman and current Ambassador to OECD Connie Morella was the chief sponsor of the bill which became law. She was joined in the introduction of the bill by Congressmen Bob Walker, George Brown, and John Tanner. Ben Wu was her chief staffer on the bill. The late Jon Paugh from the Department of Commerce Technology Administration was invaluable in making sure the bill was written correctly and met the needs of the various agencies. The standards community provided support from outside the government. This was an era when the government and the standards community had very strong leaders both inside and Standards is not an issue that Members of Congress tend to know much about. However, they are quick studies and rise to the occasion ... when the time comes for them to legislate in a specific area.

# outside the government including Sergio Mazza, Arati Prabhakar and Mary Good.

Standards is not an issue that Members of Congress tend to know much about. However, they are quick studies and rise to the occasion in this and a million other areas when the time comes for them to legislate in a specific area. This makes it very important for the standards community to be well represented in Washington. I don't ever remember a time when there were more knowledgeable and active people representing the standards community. While overall, knowledge of the senior members has increased concerning standards, it is because the standards community's issues are being raised in an intelligent way and they have had to deal with the *Standards Development Organization Improvement Act* relatively recently. The warm, cooperative response we received as we moved that legislation through the legislative process to me is a good measure of just how far we have come in raising the visibility of voluntary consensus standards.

# **AR:** What were some of the challenges in getting the NTTAA approved?

**Turner:** The biggest challenge in getting NTTAA signed into law was timing. Despite 1995-96 being one of the most partisan times in my memory, we did not have any huge fights as we moved the legislation forward. Good ideas were accepted and the legislation was improved. Ben Wu deserves a lot of credit for this.

However, it is important to remember that a bill being signed into law is the halfway point in getting a policy established. We worked much harder and had to deal with a much wider range of concerns as



OMB, under the guidance of Virginia Huth, put together the version of OMB Circular A-119 that reflected the legislation. When the draft regulations went out for comment, groups who had been silent during the legislative process learned about the legislation and made their concerns heard. After a couple additional years of hard work, we had a regulation that is not perfect, but which has stood the test of time.

**AR:** During the past ten years, tremendous progress has been made in the cooperative standardization efforts of industry and government, and millions of dollars have been saved by mitigating overlap and duplication. In your view, how can public/private partnerships build on the success of the NTTAA and be further improved?

**Turner:** The biggest change that has happened in the standards world and elsewhere since the passage of the NTTAA is the creation of the Internet and related software. It is now possible to share everything related to standards anywhere around the world in real time and to put together groups that could not be put together before. The standards community has made major strides in reducing the cycle time for standards development by using the Internet, but this is just one small part of the way our world needs to change to respond to these new technologies.

Let me describe one of many examples. The Firestone/Ford Explorer deaths and tire recall is an example of how we dealt with problems before the Internet. Firestone made tires according to specifications that were treated as accessories rather than an integral part of the success of the vehicle. Tire repair shops had to have seen defective tires. Department of Motor Vehicles had to have failed some of these vehicles during inspection. It took a few fatalities for the crisis to get to the attention of senior corporate management and federal regulators.

Let's think about what we could do with an expanded supply and safety chain now that we have the Internet and the role standards could play. Federal and state regulatory agencies and the Department of Motor Vehicles should participate in standards development alongside the tire manufacturers, the car companies, and all other interested parties until we got to the point where the standard meets all industry and government needs. The new standards related to tires could define normal wear throughout the life of the tire and could specify how the tire is manufactured and tracked throughout its life. Department of Motor Vehicles and tire shops would be then measuring tire wear in the manner most useful to the tire and auto industries. Data would be instantaneously shared rather than dumped. The information could be analyzed by the tire manufacturers or others in accordance with standards that the regulators had signed off on using AI [artificial intelligence] software to identify unusual patterns just like credit card companies do to detect potentially fraudulent purchases that don't match a consumer's prior spending practices. Then the dealer or the customer's repair shop could email the customer to get them into the shop as quickly as possible and the tire manufacturer could use the data for R&D or to avoid similar problems in the future. With luck, major recalls would be a thing of the past and overall safety of autos would go up dramatically when other components of the safety inspection were geared in a similar fashion by the government to the public's well-being and by the company to the demands of the marketplace including product improvement. This also would lead to a complete rethinking of how industry, government and consumers interact.

**AR:** Thank you. Are there any other thoughts you would like to share with our readers?

**Turner:** We are just beginning the process of integrating the huge increase in computing and communications power into our daily lives. If software and applications could keep up with the increased capacity of computers and communications equipment, our productivity would be increasing much faster than its current three percent. Moreover, Moore's law will accelerate rather than decelerate in the coming decade. More inclusive, faster, and more relevant procedures for the development and use of standards are the key to this future.

## Why should government agencies at the federal, state and local levels adopt voluntary consensus standards developed in the private sector?

According to OMB Circular A-119 – Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities: "The use of [voluntary consensus] standards, whenever practicable and appropriate, is intended to achieve the following goals:

- Eliminate the cost to the Government of developing its own standards and decrease the cost of goods procured and the burden of complying with agency regulation.
- □ Provide incentives and opportunities to establish standards that serve national needs.
- Encourage long-term growth for U.S. enterprises and promote efficiency and economic competition through harmonization of standards.
- □ Further the policy of reliance upon the private sector to supply Government needs for goods and services."

- Excerpt from the NIST NTTAA Frequently Asked Questions page (http://ts.nist.gov/ts/htdocs/210/nttaa/nttaa-qa.htm)





t is a distinct pleasure for those of us at the National Institute of Standards and Technology (NIST) charged with carrying out NIST's coordination role under the National Technology Transfer and Advancement Act of 1995 (NTTAA) to work with agency Standards Executives across the federal government to implement the provisions of both the NTTAA and Office of Management and Budget (OMB) Circular A-119. Management and staff in agencies both large and small have embraced the provisions of the law and Circular and have made tremendous strides in increasing their reliance on voluntary consensus standards in a wide range of agency activities.

Both OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities, and the NTTAA, which was signed into law on March 7, 1996, recognize the valuable contributions that private sector standards make to enabling the government to carry out its responsibilities. Equally important is the recognition in law and policy of the fact that close interaction and cooperation between the public and private sectors is critical to developing and using standards that serve national needs and support innovation and competitiveness.

The Act directs NIST to coordinate these activities across the government, working in cooperation with executive branch departments, agencies and independent commissions, more than 25 in all. NIST's coordination responsibilities include preparation of the annual report to OMB reporting federal progress in using voluntary consensus standards for each year along with agency participation in standardsrelated activities. NIST also leads the interagency coordinating committee that monitors compliance with the provisions of the NTTAA. The Interagency Committee on Standards Policy (ICSP), which advises Executive Branch agencies about standards policy matters, has been very active since the passage of the NTTAA. Management and staff in agencies both large and small have embraced the provisions of the law and Circular and have made tremendous strides in increasing their reliance on voluntary consensus standards . . . .

Mary Saunders, Chair
Interagency Committee on Standards Policy

# COORDINATOR AND FACILITATOR

### the unique role of NIST in NTTAA implementation

Members have shared information on both the practical and policy implications of the law and have worked closely with OMB to ensure full understanding of the resources that agencies bring to bear in carrying out the direction of the law and Circular.

#### A Key Player

The federal government is a key player in the U.S. standards system. The more than 3,500 agency representatives who participate in the private sector-led standards development process are instrumental in ensuring agency compliance with the NTTAA and OMB Circular. Even more importantly, government participation means that government users understand both the intent and content of specific standards. The data collected over the last ten years indicate real progress both in active participation in the standards development process and in agency reliance on private sector standards. In 2005, government agencies reported using, since 1997, a cumulative total of more than 4,000 voluntary consensus standards in support of regulation. In the procurement arena, the Department of Defense leads the pack, with 9,053 private sector standards on its books in 2005 to support the purchase of a tremendous volume of equipment, supplies and services. Federal use of standards underscores the value and impact of standards developed through the voluntary consensus process.

Government representatives participate in the activities of more than 400 standards developing organizations, at both the technical and policy levels. This participation predates the implementation of the NTTAA, but has been bolstered by the Act's formal recognition of its importance. Many of the major standards developing organizations have government agency representation on their governing boards. These include the Society of Automotive Engineers, ASTM International,



and the Institute of Electrical and Electronics Engineers' Standards Association. The American National Standards Institute (ANSI) Board of Directors includes nine government agency representatives, 21% of the Board's membership.

#### Need for Better Data

Sound economic analysis to demonstrate the benefits of greater use of private sector standards and conformity assessment activities is essential for making the case for federal agency leaders to intensify their agencies' activities in these areas. However, capturing this important information has thus far proven to be extremely difficult. The NIST-sponsored study, *Measuring the Benefits of the National Technology Transfer and Advancement Act*, which was conducted in 2004 by RTI International, points to (1) a lack of useful data necessary to support economic analysis, and (2) the difficulties federal agencies face in gathering data that can be used to estimate economic benefits broadly across the federal government. Yet, we know that participating in standards development can be an effective alternative to devoting federal resources to separate regulatory activities. Consequently, there are real opportunities for improvements in methods and techniques to demonstrate the economic benefits of NTTAA implementation.

#### **Other Challenges**

Sustained high-level federal agency leadership is the primary driver of successful NTTAA implementation. Top agency leaders have the ability to direct policy and resources in ways that bring about other desirable outcomes such as increased federal participation and collaboration with the private sector. Ensuring that agency Standards Executives are visible to and supported by senior agency management must be a continued priority.

In addition, significant personnel turnover at all organizational levels due to reorganizations, accelerated or early retirements, and normal attrition has the potential to erode standards-related institutional knowledge across the government. As in industry, these changes make it very difficult for federal agencies to retain high-level managers who appreciate the importance of standards and who visibly support standards-related activities. Shrinking budgets and competing organizational priorities cause agencies to reduce participation in standards development activities.

#### What about the Future?

Agencies are moving beyond counting the number of voluntary consensus standards used to making standards part of their overall decision making processes. Increasingly, agencies are recognizing or listing a wide range of national and international consensus standards as a component of agency guidance or recommendations in key areas. They are also making "beyond-regulation" use of voluntary consensus bodies and of programs operated by ANSI in particular. For examples, EPA leaders in environmentally preferable procurement acknowledge the important role of voluntary consensus organizations for the development and promulgation of standards for environmentally conscientious products. EPA partnered with ANSI to educate and train standards organizations in the need for such environmental products. Two agencies, the Department of Defense and the Department of Homeland Security, rely on ANSI's accreditation of personnel certifiers to meet their program needs; several other agencies are exploring use of the accreditation service.

Finally, federal agencies are leveraging their partnerships with the private sector in both the standards and conformity assessment realms to address national policy and technology needs. Both the Department of Homeland Security and the Department of Health and Human Services, through its Office of the National Coordinator for Health Information Technology (ONCHIT), participate actively in standards panels administered by ANSI, which bring together stakeholders in key national priority areas, to identify voluntary consensus standards in existence and those which need to be developed. These panels are vehicles for the government to make known its standards needs early and bring the resources of the private sector to bear to address these needs. The Departments of Defense, Transportation and Energy have each contributed to the development of standards strategies for technologies ranging from aerospace to intelligent transportation systems to the hydrogen economy. The President's Office of Science and Technology Policy has led the way in the nanotechnology arena, working with private sector interests to identify needs for nanotechnology standards and the best venues for this work to be accomplished.

In the future, we are likely to see more of these types of strategic partnerships as both the government and private sector look out over the next five to ten years to identify critical standards activities that will both facilitate innovation and global competitiveness while also meeting broad public needs at home for protection of health, safety and the environment.

Mary Saunders (mhs@nist.gov) is chair of the Interagency Committee on Standards Policy and chief of the standards services division at the National Institute of Standards and Technology.

#### In summary, the NTTAA directs NIST to:

- Coordinate with other Federal agencies as well as state and local governments to achieve greater reliance on voluntary standards and lessened dependence on in-house standards.
- Assist Federal agencies in comparing standards used in manufacturing, commerce, industry, and educational institutions with the standards developed by the Federal Government.
- Coordinate greater use of private sector standards by Federal agencies, states and local governments via the Interagency Committee on Standards Policy (ICSP).
- Emphasize, where possible, the use of standards developed by private, consensus organizations.
- Create guidance on conformity assessment activities.





# consumer protection and consensus standards

The U.S. Consumer Product Safety Commission (CPSC) was created in 1972 under the Consumer Product Safety Act. It is an independent agency that does not report to, nor is it part of, any other department or agency in the federal government. The CPSC is directed by Congress to protect the public "against unreasonable risks of injuries associated with consumer products." Today, there are 15,000 types of consumer products that fall under the Agency's jurisdiction, such as toys, cribs, power tools, cigarette lighters, and household chemicals, and CPSC has contributed significantly to the 30 percent decline in the rate of deaths and injuries associated with consumer products over the past 30 years. he U.S. Consumer Product Safety Commission (CPSC) works with standards developers, consumers, industry and other interested parties to develop safety standards for a wide range of consumer products. The Consumer Product Safety Act (CPSA) mandates that if a voluntary standard exists, by law, CPSC may issue a mandatory standard only when the voluntary standards will not eliminate or adequately reduce the risk of injury or death or it is unlikely that there will be substantial compliance with the voluntary standard. Over the last fifteen years, CPSC has worked with industry and others to develop more than 300 voluntary standards while issuing only 35 mandatory rules, almost a nine-to-one ratio of voluntary to mandatory standards.

When mandatory safety standards arise, CPSC generally develops performance standards rather than design standards to give manufacturers the most flexibility in meeting requirements. The Commission may initiate rulemaking based on petitions from outside parties or based on internal staff work. Input is sought from all interested parties, including consumers, industry and other government agencies.

CPSC staff have repeatedly found that voluntary efforts are often faster and less costly to implement than mandatory efforts. Some of the Commission's greatest success stories are in the voluntary standards area.

#### CPSC cooperation with voluntary consensus standards developers

CPSC staff participate in the development of voluntary standards by providing expert advice, technical assistance, and information based on data analyses of how deaths, injuries, and/or incidents occurred. This may include the submission of recommendations for new standards or modifications of existing standards to voluntary standards organizations. Upon acceptance of these recommendations, the standards developing organization is responsible for completing the technical work to support the requirements, publish a proposal for public comment, and publish a standard.

CPSC comments are considered throughout the standards-setting process and help to strengthen existing and develop new voluntary safety standards. Because CPSC policy does not permit staff to vote on proposed changes or new standards, however, participation is limited to "non-voting member" status on a consensus body.



#### case study: ground-fault circuit-interrupters

For several years, CPSC staff have participated in voluntary standard and code activities involving Ground-Fault Circuit-Interrupters (GFCIs) to promote their use and improve their reliability. A GFCI is an electrical device that minimizes the risk of severe or fatal electric shock. Electrocution deaths associated with consumer products decreased from 270 in 1990 to 180 in 2001. GFCIs have contributed significantly to the reduction of electrocution and severe electric shock incidents since their introduction in the early 1970s.

The National Electrical Code (the National Fire Protection Association's NFPA 70), the model code for electrical wiring installations, requires GFCIs for receptacles located outdoors, in bathrooms, garages, kitchens, crawl spaces and



unfinished basements, and at certain locations such as near swimming pools. CPSC believes that expanded use of GFCIs could result in additional reductions in electrocution deaths. GFCIs are also required for laundry sinks, hardwired boat hoists, vending machines and in outdoor public spaces. Several new requirements in the Underwriters Laboratories (UL) standard, UL 943, *Safety for Ground-Fault Circuit Interrupters*, became effective in January 2003 and should increase their reliability in certain environmental conditions.

In 2005, CPSC staff began working with industry to begin to develop a self-testing GFCI. Self-testing GFCIs would reduce the concern that this safety device may be non-functional. In addition, the self-testing GFCI would not provide power if the GFCI did not pass its test. This would ensure that electrical safety is maintained in those critical locations where GFCIs are required by codes and standards.



#### case study: gas water heater safety

CPSC and the Gas Appliance Manufacturers Association partnered on improvements in gas water heater technology to help prevent incidents that can take the lives of or severely injure children and adults across the country each year. Gas water heater ignition of flammable vapors is involved in nearly 800 residential fires, resulting in an average of five deaths and 130 injuries annually, according to CPSC estimates. The fires typically occur when consumers use flammable liquids, usually gasoline, for cleaning purposes, or when a flammable liquid leaks or is spilled near the water heater. When the vapors come in contact with the appliance's burner or pilot light, the vapors ignite, causing a severe flashback fire.

A voluntary standard developed by industry, in cooperation with the CPSC, calls for conventional tank-type gas water heaters manufactured after July 1, 2003, to be equipped with a safety technology, often referred to as a flame arrestor. This safety feature prevents flashback fires by trapping and burning dangerous gas vapors inside the heater while also preventing ignition of the vapors in the room.

The American National Standard ANSI Z21.10.1a was approved in two parts: The first requirement, for flammable vapors-ignitionresistance, was approved in February 2000; and the second requirement, for the heater to be resistant to lint, dust and oil accumulation, was approved in November 2002. The final standard, incorporating both parts, became effective on July 1, 2003. All 30, 40, and 50gallon gas storage type water heaters manufactured after this date are expected to comply with the national safety standard.

The introduction of residential gas storage water heaters that meet this safety standard is an example of the CPSC and manufacturers working in harmony, using the voluntary standards system, to improve the safety and efficiency of a product.



#### case study: window safety treatments

From 1991 to 2000, CPSC received reports of 160 strangu-

lations involving cords on window blinds. In 2003, CPSC teamed with the American Society of Safety Engineers and the window covering industry in an effort to educate families on the dangers to infants and young children from pre-2001 window coverings. In a public educational campaign the CPSC and the Window Covering Safety Council (WCSC) urge people with pre-2001 window coverings to repair or replace them.

ANSI/WCMA A100.1-2002, Standard for Safety of Corded Window Covering Products, sets requirements for cellular shades, horizontal blinds, pleated shades, roll-up shades, roman shades, traverse rods and vertical blinds, that reduce the possibility of injury, including strangulation, to young children from the bead chain, cord, or any type of flexible loop device used to operate the product.

The CPSC warns that the most dangerous products are older miniblinds with looped pull cords; mini-blinds made after 1995 do not have looped pull cords. Blinds without cord stops are also hazardous. Since 2001, cord stops were automatically built into blinds and shades. However, millions of un-repaired, older corded window coverings are still in homes.

ASSE urges the public to review the "*Repairing Window Cords to Reduce Strangulation Risks*" illustrated guide and "*Window-Cord Safety Rules*" at www.windowcoverings.org or to call 1.800.506.4636 to order free cord-repair kits.



I'm proud of our staff's work with standards setting organizations and ANSI, as well as industry and others during the development of voluntary industry standards. We will continue to foster our relationship with the voluntary standards community and build on past success.

CPSC Chairman Hal Stratton

#### conclusion

The CPSC works cooperatively with the private sector standardization and conformity assessment community to mitigate product hazards and ensure that both domestic and foreign firms comply with safety laws and standards.

"I'm proud of our staff's work with standards setting organizations and ANSI, as well as industry and others during the development of voluntary industry standards," says CPSC Chairman Hal Stratton. "We will continue to foster our relationship with the voluntary standards community and build on past success."

CPSC and industry are collaborating to lead the development and design of new and improved safety requirements without compromising other efficiency or safety characteristics. Consumers are the ultimate beneficiaries.





# FAST FORWARD

DoD set the pace for federal agency reliance on voluntary non-government standards

by Gregory E. Saunders, Standards Executive Director, Defense Standardization Program Office U.S. Department of Defense he Department of Defense has a proud tradition of being at the forefront of standards development for the procurement of advanced technology products and processes that are vital to our national defense and ultimately to U.S. industrial competitiveness. Being an engaged and educated customer facilitates develop-

ment of standards necessary to support such DoD goals as interoperability and coalition warfighting capability. The Department believes that Section 12 of the National Technology Transfer and Advancement Act (P.L. 104-113(1996)) (NTTAA) is well crafted. It clearly states that it is the intent of the Congress to promote the use of non-government standards in federal agencies, giving agencies the necessary flexibility to make smart business decisions and best represent the public interest. The DoD supports this Act, and we believe our efforts show we are strongly committed to it.





With a procurement and research and development budget of more than \$145 billion, the Department of Defense is the largest single buyer of goods and services in the federal government and perhaps in the world. Millions of contracting actions are executed each year, many of which require the use of military-unique or non-government standards. These standards may define the

products, materials, manufacturing processes, test methods, or other activities associated with the acquisition of goods and services for the department. One reason why DoD began adopting non-government standards was to reduce redundant work. There were cases in which DoD and private sector standards committees were developing documents for similar or identical products, thus DoD was committing scarce resources to developing standards that were already commercially available. Similarly, we saw a potentially economic benefit to using commercial products whenever feasible rather than inventing new, government-unique products. Since we wanted to stay current with the commercial marketplace, we formulated a policy to automatically adopt new revisions of non-government standards without further review. This policy demands attention and participation by the technical offices responsible for the products or processes, and ensures that we remain at the forefront of practical technical development in those areas.



The bottom line . . . is about saving the taxpayer's dollars and improving performance, quality, safety, and reliability.

#### **MIL-SPEC Reform**

Our shift away from Military Specifications and Standards (MilSpecs), to the use of non-government standards, predates passage of the NTTAA. As far back as the 1960s, initiatives were put in place to adopt relevant non-government standards whenever practical. The biggest boost to adopting non-government standards came in the form of an initiative known as MIL-SPEC Reform. With clearly defined goals, we set out to eliminate the automatic and unthinking imposition of MilSpecs on our contractors. Under this initiative, MilSpecs were only to be used when absolutely necessary, and non-government standards were to be substituted wherever practical As one could imagine, this shift from the use of MilSpecs to non-government standards had a profound impact on the defense community. Contracts went from having hundreds of required specifications and standards to having only a few, if any. Some thought that this was progress; others thought this was the harbinger of disaster. As it turned out, it was the catalyst for a thorough review of the body of MilSpecs, conversion to non-government standards, and a movement to performance based specifications instead of detailed, prescriptive documents. The military departments and defense agencies seriously took the direction to review all documents, and to cancel, convert, or revise them. The result was a body of documents that was pretty well scrubbed to ensure that they were necessary, that they reflected commercial practices as much as possible, and that they were written in performance terms to the greatest extent practical.

#### Savings and Improvements

The bottom line, of course, is not about the numbers of documents; it's about saving the taxpayer's dollars and improving performance, quality, safety, and reliability.

As a result of shifting to the use of non-government standards, data suggests that the DoD has saved significant dollars. Over the past eleven years, some examples of significant cost avoidance or negotiated savings have included:

- 219 contractor facilities replaced military standards for quality systems with ISO 9000 or other non-government standards for savings and cost avoidance of \$25 million.
- 30 contractor facilities replaced military standards for calibration with ISO, ANSI, or other non-government standards for savings and cost avoidance of \$50 million.
- 55 contractor's facilities replaced military standards for soldering with an ANSI or other non-government standard for savings and cost avoidance of \$31 million.

Today the Department of Defense relies on a mix of more than 31,000 military, federal, NATO, and industry standards, including performance specifications, international standardization agreements, non-government standards, and commercial item descriptions. The passage of the NTTAA recognized the increasing importance of non-government standards. This law not only encouraged participation and use of private sector standards, but also required federal agencies and departments to explain failures to use non-government standards when they could meet their needs. By the time the NTTAA was signed into public law in March of 1996 the DoD had already adopted 7400 non-government standards. Today the number of DoD-adopted non-government standards is over 9500.

Through our own MilSpec Reform Initiative and by implementing both the letter and spirit of the NTTAA, the DoD has taken an active role in ensuring interoperability for the future. Both within our own military services and with our allies, the keys to success depend on the availability of suitable non-government standards. As a general rule, we realize we must continue to participate with private sector standards development organizations, not only to stay engaged in efforts to identify future needs, but also to keep apprised of cuttingedge industry directions.



# safeguarding the environment with voluntary consensus standards

How the NTTAA HELPED TO PROPEL THE ENVIRONMENTAL PROTECTION AGENCY'S USE OF VOLUNTARY CONSENSUS STANDARDS AND ENHANCE THE WORK OF THE AGENCY

he U.S. Environmental Protection Agency (EPA) and other federal agencies have been engaging with private sector standards developing organizations and using voluntary consensus standards for years. Agencies do so in the course of meeting their own mandated missions. More than 200 EPA employees have participated in ASTM International and other standards organization committees since the Agency began in the early 1970s. In 1982, the Office of Management and Budget (OMB) directed across-the-board federal use of voluntary standards in OMB Circular A-119 "Federal Use and Participation in the Development of Voluntary Consensus Standards." At that time the Circular was particularly focused on federal procurement programs.

Passage of the National Technology Transfer and Advancement Act (NTTAA) in 1996 ramped up the directives of the initial Circular and expanded the scope to include regulatory as well as acquisition activities. As in other agencies, the Act and revised Circular increased the level of standards awareness within EPA and in 1999 the Agency demonstrated its commitment to use voluntary consensus standards by joining and actively participating in the American National Standards Institute (ANSI) as a member.

#### tapping into wider resources

When EPA develops regulations to implement the laws of Congress, the Agency rule writers often need to include technical requirements in the form of test methods. EPA may promulgate as many as six to nine hundred rules each year and about half of them reference the NTTAA. The NTTAA has made it easier for EPA to identify, evaluate and adopt voluntary standards instead of having to create government-unique methods. The law also enables greater collaboration between EPA and private sector technical experts. This is a value to the Agency, the public and the standards community. Technical and environmental expertise are married in way that helps supports sustainable production and consumption. It is a win-win situation.



The Agency also uses voluntary standards in guidance and nonregulatory programs. Recently, for example, EPA successfully partnered with ASTM International to develop a standard test method on radon mitigation that builds upon the EPA's existing radon mitigation standards and provides an improved measure of public health protection. After soliciting and considering the many comments provided by the states, radon industry, proficiency organizations, and others, EPA incorporated ASTM E2121, *Standard Practice for Radon Mitigation Systems in Existing Low-Rise Residential Buildings*, by reference into its national voluntary radon program. As of March 31, 2006, the ASTM standard will be the sole reference and EPA will retire the existing agency method.

Another agency priority is the environmental performance of electronics products. In this case, EPA administered a stakeholder committee including representatives from industry, consumer groups, academia, states and other federal agencies to develop a draft standard as part of its Environmentally Preferable Purchasing program. The Electronic Product Environmental Assessment Tool (EPEAT) is a procurement tool designed to assist institutional purchasers in evaluating and selecting electronic products such as desktop computers, laptops and monitors based on their environmental attributes.

Working through the Institute of Electrical and Electronics Engineers (IEEE), an ANSI-accredited standards developer, the program criteria will be finalized upon the approval of IEEE P1680, *Standard for Environmental Assessment of Personal Computer Products*. This will be the first comprehensive U.S. standard to support the incorporation of environmental considerations into institutional purchasing decisions for desktop and laptop computers and monitors.



"The standard responds to a strong call from purchasing agents who want consistent environmental criteria for comparing and selecting computers and monitors," said Holly Elwood, chair of the IEEE P1680 working group and project manager for the EPA's Environmentally Preferable Purchasing Program. "We expect the standard to foster green product design and reduce the overall environmental and health impacts of these products. In essence, IEEE P1680 sets voluntary criteria for environmental performance and creates a system for identifying and verifying that computer products meet these criteria."

EPA chose to work through the IEEE because of its strong brand recognition and its accreditation by ANSI as a standards developer a verification that the organization operates under an open and consensus-based process. This will "make it easier for federal purchasing agents to adopt the standard since they are encouraged to use consensus industry standards," added Elwood. The document is expected to be complete and publicly available by April 30, 2006.

#### EPA and environmental management system standards

When the international community decided in the early 1990s to develop a certification standard for environmental management systems (and several guidance standards to support it), EPA was one of the first federal agencies to recognize the potential for such standards and sign up for participation through the auspices of ANSI. The Agency has remained active in the ANSI accredited U.S. Technical Advisory Group (TAG) that enables participation at the international table and brings U.S. views and interests to bear on the globally used standards, namely the ISO 14000 series.

Environmental Management Systems (EMS) are also the subject matter of Executive Order 13148, *Greening the Government Through Leadership in Environmental Management*, which directs federal agencies to implement an EMS at all "appropriate" sites based on facility size, complexity, and nature of environmental aspects. EPA was tasked with providing guidance to the federal community on practices and standards for meeting the intent of the Order, and to track federal progress. As part of the Agency's ongoing responsibility to provide guidance, EPA recently issued a position statement that includes reference to the international standards that Agency employees were involved in crafting.

EPA will encourage the use of recognized environmental management frameworks, such as the ISO 14001 Standard, as a basis for designing and implementing EMSs that aim to achieve outcomes aligned with the nation's environmental policy goals and the principles of this Position Statement.

-Federal Register: February 2, 2006, Volume 71 Number 22

A number of federal facilities are also signed up to the Agency's Performance Track program that assists in the establishment of an EMS and how to measure the appropriate and significant performance results. Some of these facilities have found that certification to the ISO 14001 standard is a helpful tool in achieving, and improving measured performance levels. EPA's own Region 3 laboratory in Fort Meade, MD, has been certified to the ISO standard.

#### the seeds have been planted

Benefits of the NTTAA are only beginning. When the OMB Circular was first published many in the federal community believed that the biggest benefit would be cost savings to the government, and certainly there has been a reduction in the costs associated with developing government-unique standards. The NTTAA offers potential beyond costs of standards development. It opens a passageway of communication that can enhance the ability of governmental programs to protect and serve the public good in accordance with their legislative authorities. Standards underpin everything from technology for clean water delivery systems to fuel efficient automobiles to safer chemicals, improved business practices for sustainability and much more.

Effectiveness of the NTTAA must be counted in more ways than just the number of standards used by government or the number of government participants in the work of SDOs. Greater public and private benefits of the NTTAA may come with more comprehensive and strategic links between standards-related needs inside and outside the government and the ability to call upon an expanded cache of expertise in order to deliver the very best standards for whatever the need.

Today, the NTTAA is fostering this level of integration, but it has yet to reach its full potential. The seeds have been planted.  $\blacksquare$ 

### IT'S EASY BEING GREEN: ANSI AND THE EPA

#### **Environmentally Preferable Purchasing (EPP)**

A federal-wide program that encourages and assists executive agencies to incorporate into purchasing decisions the consideration of a product's impact on the environment. Environmentally preferable products and services have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.

**Goal:** EPA wants more standards to incorporate environmental and life-cycle elements that can be referenced and/or recommended as the basis for both public and private sector purchasing decisions.

Action: In 2003, ANSI stepped in to assist the EPA by developing a presentation to introduce its accredited standards developers to the EPP program and to help explain the many benefits available to organizations that work to meet the significant demand for environmentally preferable products.

#### Information: www.ansi.org/epp



by Richard H. Weinstein, Standards Executive Office of the Chief Engineer National Aeronautics and Space Administration

# GOING WHERE NO STANDARDS HAVE GONE BEFORE

### NASA'S RESPONSE TO THE NATIONAL TECHNOLOGY TRANSFER AND ADVANCEMENT ACT

Use of voluntary consensus standards (VCS) in the past ten years has been driven by the National Technology Transfer and Advancement Act (NTTAA). Implementation of the Act has been enabled through more capable information technology that makes it easier to identify and access standards. Finding non-government standards is no longer "rocket science" — which is great news when your business really *is* rocket science.



rom the time of its formation in 1958, the National Aeronautics and Space Administration (NASA) has been dedicated to missions that push the limits of technology.

The science and engineering is challenging, earth orbital and planetary programs are expensive, and the safety demands of human space flight require an extra measure of confidence in the standards used to design, test and operate space systems. Having the right standards is critical to success, but where do these standards come from, and how do we get the necessary perform-

preference to — for an enterprise that is not market driven? Historically, many of the baseline standards used for space systems grew from aeronautics. But the unique requirements of space systems pushed the limits of design, environment and performance and the old standards frequently were inadequate. Not surprisingly, many of the first required standards and guidelines that were used for space programs were developed internally in NASA, the Department of Defense (DoD) space programs, and by the companies responsible for building these systems.

ance from the private sector standards that the law tells us to give

In areas such as materials specification and testing, however, much work was done through established standards developing organizations (SDOs). Even there the unique requirements and severe environments in which NASA works often led to the development of supplemental internal test procedures.

Electronics was another early space program specialty. Ironically, the success of commercial electronics drove some sectors in directions that no longer met space system requirements for long term reliability.

#### Is "Culture Change" Management Mumbo Jumbo?

The NASA space program was already 40 years old when the passage of the NTTAA forced us to re-examine whether the space program needs were so unique that they could not be met by voluntary consensus standards (VCS). Even more difficult was the task of convincing the engineers who wrote the original specifications that we could rely on somebody else's standards. "Cultural change" always sounds like management mumbo jumbo, but that's exactly what we were after reaching more people with the information to build acceptance of common standards in general and receptiveness to VCS in particular.

The NASA Technical Standards Program was established in 1996 to respond to changing factors such as the need for increased program cooperation among NASA Centers that had traditionally operated somewhat independently. We could no longer afford for each program to develop its own "wheel." The challenge was to establish a common standards culture. The National Technology Transfer and Advancement Act provided some of the incentive.

The first task was to encourage a shift from individual program standards to NASA-wide standards that would resolve differences within NASA and make more effective use of widely distributed expertise. The other mechanism chosen to bring the agency together and broaden use of standards — and VCS in particular — was establishment of a web-based Technical Standards Database (TSDB).

Previously, standards information available to NASA groups was very uneven in availability, fragmentary in content, and hard to access. The goals of the TSDB were to provide open access across NASA to standards from a wide variety of sources and to encourage more use of these resources. The search engine we developed uses a common index to query all sources with which NASA has licensing arrangements (currently more than 100). The search engine is publicly accessible to find standards on a particular topic, and also provides registered internal NASA users with full text documents. The NASA Marshall Space Flight Center houses the system and operates a detailed accounting system that not only tracks downloads to pay the licensing fees owed to SDOs, but also provides insight into what documents are used and where the users are located.

"Cultural change" always sounds like management mumbo jumbo, but that's exactly what we were after—reaching more people with the information to build acceptance of common standards in general and receptiveness to VCS in particular.

System use is growing, which confirms that the culture shift we hoped for is occuring. The TSDB logs about 200 new user registrations per month — equally split between NASA and outside users — and around 5,000 accesses a month for searching and retrieving documents. Since its launch in 2001, the monthly download of documents has grown from 2,000 to 6,000. We've also seen the positive effect of "special events" such as an awareness campaign at a NASA Center or planning for implemention of the President's January 2004 *Vision for Space Exploration*.

For several years, more than half the total documents downloaded came from VCS sources such as the Society of Automotive Engineers (SAE), Aerospace Industries Association (AIA), ASTM International, American Society of Mechanical Engineers (ASME), International Organization for Standardization (ISO), Institute of Electrical and Electronics Engineers (IEEE) and the National Fire Protection Association (NFPA).

DoD MIL documents still represent the largest source of documents used (about 30% of the total), but this is not surprising given the breadth of areas covered and their historical heritage in our systems.

Currently, NASA standards remain among the top five sources of documents. This is not inconsistent with our long-term strategy because we intend to consolidate practices internally first (sometimes more like herding cats than technical consensus) and then transfer standards to the VCS sector where there is a user base.

As an example, early in implementation of the NTTAA the Kennedy Space Center (KSC) discovered that several hundred of its in-house fluid fitting specifications were almost identical to existing VCS — except for the pressure rating. (continued on page 16)



(continued from page 15) In cooperation with the relevant SDO the specs were adapted to the higher pressure level; the VCS were adopted and the government specs were cancelled.

In another example, specifications that were developed by the Safety and Mission Assurance community for the safe handling of hydrogen and oxygen in space vehicles from Apollo to the Space Shuttle are now published as VCS.

The clear benefit of VCS-based development is providing access to a much larger pool of expertise and possibly, in the long run, contributing in some small way to the commercialization of space. Recently, the Air Force space program chose this route to develop updates of critical MIL documents.

#### It's Not the Same Old Stuff Forever

Within NASA, a forcing function for VCS transition is a policy requirement that proposals for new NASA standards must document why existing standards (from any source) do not meet the identified need. The policy further requires that the issue of conversion to or replacement by VCS be addressed at the standard's mandatory five-year recertification point.

Another process that has helped raise the visibility of VCS among our engineers is the designation of "NASA Preferred Standards." In this case, the NASA Centers are first asked to recommend standards for wider use. Upon resolution of any use limitations or other issues and concurrence by the Centers the standard can be added to the preferred list. When a search of the TSDB is initiated, the user has the option of looking at "all" or just at the NASA Preferred Standards on the topic. The objective is to help those who are looking for standards by narrowing searches to a pre-selected list of standards that have been used on NASA programs and are considered "generally" suitable for wider use.

The 3,500 VCS that are currently on the Preferred List provide a high level of exposure to private-sector standards applicable to NASA and its space programs. Though further screening is often necessary for specific program use, the list is a starting point that gives visibility to VCS and also helps to identify NASA's use of VCS for the annual report to the Office of Management and Budget.

Another measure of VCS support reported annually is the count of NASA personnel participating in standards development through SDOs. For each of several years, some 140-170 people have participated in projects through nearly 35 different SDOs. That number has been remarkably steady at a time when other government agencies are reporting drops in VCS participation. Although the total numbers remain constant, the individuals, specific organizations, and projects listed typically change by approximately 30% a year.

So it's not the same old stuff forever - NASA participation in VCS development is dynamic and varied. The list of participants on SDO projects is available internally for NASA users to support coordination of agency positions in those activities. There is also a small but increasing number of NASA-funded projects aimed at developing standards through SDOs that can, upon completion, be adopted as NASA Preferred Standards. Participation in technical committees of the International Organization for Standardization has been another avenue for converting government standards to VCS. This also provides the opportunity to promote years of U.S. experience as the basis for increasingly important international standards.

An unanticipated and welcome by-product of this cooperation has been the realization that no matter how many years of experience we have with a standard, bringing it into a larger arena invariably leads to improvements in what we thought was already a best practice.

#### Summary

NASA has come a long way and is increasing attention to use of VCS: in part through policy and in part through making the standards readily available and supporting their use. Ready access and a seamless user interface to standards from many sources in a virtual environment has been key to this effort. We look forward to continuing improvements in the management of standards information that will help carry NASA and the nation, in the words of the Space Exploration Initiative, "back to the moon, to Mars, and beyond."



### When the government needs standards . . .

ANSI IS AN APPROVED VENDOR FOR STANDARDS UNDER THE GSA ADVANTAGE PROGRAM





Conformity assessment is defined as a "demonstration that specified requirements relating to a product, process, system, person or body are fulfilled."

ISO/IEC 17000:2004
Conformity assessment —
Vocabulary and general principles

## CONFORMITY ASSESSMENT AND THE FEDERAL GOVERNMENT

The federal government, like other buyers in the global marketplace, demands that the products and services it purchases or regulates will fulfill specific needs. Confidence that these needs can and will be met is built through a variety of means, including the assessment of conformity to standards.

Many conformity assessment activities are applied in today's marketplace: accreditation, certification, inspection, registration, supplier's declaration, and testing, to name a few. Often these can be interrelated. All share a dependency on standards to define the necessary characteristics or requirements for the product, process, system or person that is being evaluated.

Standards and conformity assessment impact almost every aspect of life in the United States — and serve as the "other side of the standardization coin" as implementation of the NTTAA moves forward.

### **U.S. Department of Defense** Accreditation of Personnel Certification Programs

The U.S. Department of Defense (DoD) has mandated that its personnel and contractors who perform certain information assurance functions be certified by credentialing bodies that have been accredited by an independent third party. Signed December 19, 2005, DoD Directive 8570.1 (along with implementing manual 8570.1M) became the federal government's first venture into requiring increased accountability from personnel certification bodies.

The Directive is based upon international standard ISO/IEC 17024, *Conformity assessment* — *General requirements for bodies operating certification of persons*, which stipulates the guidelines for assessing the competence of independent personnel certification programs. ANSI, on behalf of the United States, is the first national body to launch an accreditation program for personnel certification bodies based upon the ISO/IEC 17024 standard. Two of the nine personnel certification organizations currently accredited by ANSI provide information assurance certifications that would qualify under the DoD Directive.

"We are proud to have this high level recognition from the federal government of the importance of accredited personnel certification," said Lane Hallenbeck, ANSI vice president of accreditation services. "We look forward to working with the certification agencies and companies in bringing value to their customers with the assurance that an independently evaluated certification credential has meaning."



### Federal Communications Commission Accreditation of Product Certification Programs



Quoted from "FCC and Conformity Assessment: a light regulatory approach encourages innovation" by Rashmi Doshi and William Hurst, FCC Laboratory Division ANSI Reporter — October 2005

The rapid growth of devices which use radio frequency spectrum requires that a very large number of them have to comply with regulatory and technical standards established by the FCC and other regulatory agencies.

Under the FCC's Equipment Authorization Program there are two types of Conformity Assessment Bodies:

- Accredited testing laboratories are used to perform testing of equipment subject to requirements that permit the use of a Declaration of Conformity to demonstrate compliance.
- A Telecommunication Certification Body (TCB) is used to perform third-party certification of equipment subject to the FCC requirements that require the product to be certified.

Under the rules adopted by the FCC, a TCB has the authority to review and grant an application for Certification for the FCC. . . . Currently in the U.S., TCBs are required to be accredited by the National Institute of Standards and Technology (NIST), or NIST may allow, in accordance with its procedures, other appropriate qualified accrediting bodies to accredit TCBs. NIST has recognized the American National Standards Institute (ANSI) accreditation program.

TCBs are accredited in accordance with ISO/IEC Guide 65 (1996), *General Requirements for Bodies Operating Product Certification Systems*, and the appropriate FCC Rules. The FCC has worked closely with NIST, ANSI, equipment manufacturers and test laboratories to develop an accreditation process that is consistent with the requirements the various rules. Accreditation is available for several different scopes of equipment subject to certification. TCBs may choose to obtain accreditation for any or all of the available scopes, depending on their needs.

Product approval times have to be measured in days rather than months. The FCC approach of a balance between specific technical standards and allowing appropriately qualified Conformity Assessment Bodies has led to a successful model.

For the complete article, send an e-mail request to pr@ansi.org.

### U.S. Department of Homeland Security Accreditation of Personnel Certification Programs



Quoted from "Defending the Homeland: Using certification to ensure the proficiency of transportation security screeners" by Elizabeth Kolmstetter, Ph.D., Peter Marcello, and Ann Quigley, Transportation Security Administration, U.S. Department of Homeland Security *ANSI Reporter* — October 2005

The law that created the Transportation Security Administration (TSA) in the aftermath of September 11, 2001, (Aviation and Transportation Security Act (ATSA) Public Law 107-71, approved Nov. 19, 2001) includes a number of unique provisions regarding persons employed as Transportation Security Screeners. Congress, then, explicitly recognized the criticality of hiring qualified persons into this important national security job and ensuring that those qualifications are maintained throughout employment.

TSA has submitted a letter of intent to ANSI requesting that its re-certification program be accredited through ANSI's conformity assessment program for personnel certification bodies. If accredited, the Administration will again make history as the first government agency to have an accredited certification program.

TSA is committed to and very proud of its efforts to serve and protect the American public. Certification is a critical part of our ongoing work to ensure we provide the best possible service and security.

For the complete article, send an e-mail request to pr@ansi.org.

### OVERVIEW OF ANSI ACCREDITATION SERVICES FOR CONFORMITY ASSESSMENT BODIES

The American National Standards Institute (ANSI) provides accreditation services specifically in areas that recognize the competence of bodies to carry out product or personnel certification in accordance with requirements defined in International Standards; these programs are themselves created in accordance with similar international guidelines as verified by government and peer review assessments.

The ANSI-ASQ (American Society for Quality) National Accreditation Board (ANAB) is the U.S. accreditation body for management systems. It was formed on January 1, 2005, as the transformation of its predecessor, the ANSI-RAB National Accreditation Program. ANAB, which is also a member of the International Accreditation Forum, accredits certification bodies (CBs) for ISO 9001 quality management systems (QMS) and ISO 14001 environmental management systems (EMS), as well as a number of industry-specific requirements.



# ANSI'S RESPONSE TO URGENT NATIONAL PRIORITIES

Voluntary consensus standards are necessary to enable, support, and maintain advancements in many areas of critical importance to the nation. To serve the needs of the government and the private sector, the American National Standards Institute (ANSI) is currently coordinating standards panels to address three specific areas of innovation.



HEALTHCARE INFORMATION TECHNOLOGY STANDARDS PANEL

President George W. Bush has called for the establishment of a Nationwide Health Information Network (NHIN) and the widespread adoption of electronic healthcare records within ten years to best serve the healthcare interests of the American public. In October 2005, ANSI was awarded a multi-million dollar contract from the U.S. Department of Health and Human Services to coordinate standards harmonization with the establishment of the Healthcare Information Technology Standards Panel (HITSP). As sponsor of the Panel, ANSI has united standards developing organizations, healthcare providers, public health agencies, consumers, and government agencies to achieve a set of consensus-based standards to sustain the interoperability, privacy and security of a nationwide healthcare system. ANSI is unique in its ability to bring together diverse stakeholders across industries to support coordinated standards development activities, both within and outside traditional standards development models.

"The HITSP is uniquely American, producing solutions uniquely for America," said David J. Brailer, MD, PhD, National Coordinator for Health Information Technology in the U.S. Department of Health and Human Services. "We're looking for the Panel to be able to make some tradeoffs and help us work through any U.S. versus global conflicts, whether they exist in vocabulary or standards or other things."



HOMELAND SECURITY STANDARDS PANEL

As coordinator of the U.S. voluntary standardization system, ANSI serves as a valuable resource for the federal government to turn to in meeting certain challenges presented by urgent national priorities. In 2004, ANSI convened safety, security, and business continuity experts from a wide range of industries and associations, as well as from federal, state, and local government stakeholders, to consider the need for standards for private sector emergency preparedness and business continuity. A recommendation developed by the Institute's Homeland Security Standards Panel (ANSI-HSSP) offered the American National Standard for Disaster/Emergency Management and Business Continuity Programs (NFPA 1600), which establishes a common set of criteria and terminology for preparedness, disaster management, emergency management, and business continuity programs. This private sector standard was endorsed by the National Commission on Terrorist Attacks Upon the United States (also known as the 9-11 Commission) in its final report to the President and Congress. As part of its mission, the ANSI-HSSP assists the Department of Homeland Security by accelerating the development and adoption of consensus standards critical to homeland security.



### NANOTECHNOGY STANDARDS PANEL

In 2004, ANSI was approached by the Office of Science and Technology Policy in the Executive Office of the President to address standardization in the area of nanotechnology to support academics, various industries, the investment community and government agencies working in this burgeoning field of technologies. ANSI responded by establishing the Nanotechnology Standards Panel (ANSI-NSP) with an open and inclusive member base including the academic community, legal profession, industry, government, standards developers and other subject matter experts. As nanotechnology becomes more commercially viable and progress is made in the manufacture and characterization of nanoscale materials, it is increasingly important to have agreed upon standards. The ANSI-NSP serves as the cross-sector coordinating body for the purposes of developing standards in the area of nanotechnology including, but not limited to, nomenclature/terminology; materials properties; and testing, measurement and characterzation procedures.



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- The American National Standards Institute (ANSI) enhances the global competitiveness of U.S. business and the American quality of life by promoting, facilitating and ensuring the integrity of voluntary consensus standards and the systems that assess conformity assessment to them.
- The Institute represents the interests of its government agency, company, consumer, organization, institutional and international members through its office in New York City and its headquarters in Washington, D.C.
- ANSI is the official U.S. member of the International Organization for Standardization (ISO) and, via the Institute's U.S. National Committee, the International Electrotechnical Commission (IEC). The Institute is a founding member of the International Accreditation Forum (IAF), the long-time U.S. member of the Pacific Area Standards Congress (PASC) and the Pan American Standards Commission (COPANT).