



Guidance on Participation in the Development and Use of Non-Government Standards

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The HSI authors are also indebted to Gordon Gillerman of the National Institute of Standards and Technology, the DHS Standards Council, Peter Shebell of the DHS Test & Evaluation and Standards Division, Bradford Wing and John Mayer-Splain of the US-VISIT Program, Ira Reese of U.S. Customs and Border Protection, and Robert Webb from the Office of the General Counsel for their contributions as reviewers and editors.

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FOREWARD

A major change occurred in the way in which Federal agencies interact with the private sector standards development community when Congress passed the National Technology Transfer and Advancement Act (NTTAA) of 1995. The intent of the NTTAA is to promote the commercialization of technology and industrial innovation. The Act requires all federal agencies and departments to use technical standards that are developed or adopted by voluntary consensus standards bodies, unless such use is impractical or inconsistent with law. To implement this Act, the Office of Management and Budget (OMB) issued Circular A-119, “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities” (February 1998)¹. The Circular reiterates the Act’s requirements for the use of voluntary standards and provides guidance to promote consistent application of the Act across federal agencies and departments. In addition to being the law, it is in the best interest of the Department of Homeland Security (DHS) to participate in the development of non-government standards (NGSs) and to adopt and use them to the extent feasible, practical, and economical.

The use of NGSs supports DHS commercial acquisition goals, DHS grants programs, capitalizes on a wider range of subject matter experts at little or no cost to DHS, supports the U.S. industrial base, and in general improves the products and services DHS develops for its components and its state, local, tribal, and private sector customers and stakeholders.

The DHS Test & Evaluation and Standards Division has established a DHS Standards Council and over 15 Standards Subject Area Working Groups (SSAWGs). Membership on the Standards Council is limited to Federal employees and the SSAWGs are also largely populated by government employees and support contractors. Through the Council, the SSAWGs, and other vehicles, the DHS Test & Evaluation and Standards Division has engaged numerous NGS bodies. To engage a wider audience of homeland security stakeholders, the DHS Test & Evaluation and Standards Division is actively working with the American National Standards Institute’s Homeland Security Standards Panel (ANSI-HSSP). The Division encourages participation by all interested parties, particularly DHS components and operational elements, in the workshops conducted by the ANSI-HSSP which concern issues related to their responsibilities.

The Test & Evaluation and Standards Division is indebted to the Defense Standardization Program Office of the Department of Defense and its Director, Gregory E. Saunders, for their efforts in developing the guidelines, such as SD-9, upon which this document is based.

For any questions or comments about this document or DHS’ NGS policies, please contact Mr. Peter Shebell of the DHS Test & Evaluation and Standards Division at 202-254-5706 (peter.shebell@dhs.gov).

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¹ Links to the text of both the NTTAA and OMB Circular A-119 as well as discussion of the documents can be found at <http://standards.gov/NTTAA/agency/index.cfm>.

LIST OF ACRONYMS

ANSI	American National Standards Institute
ANS	American National Standard
ASME	American Society of Mechanical Engineers
CBP	Customs and Border Protection
CIE	International Commission on Illumination
DHS	Department of Homeland Security
HSI	Homeland Security Institute
HSSP	Homeland Security Standards Panel
ICAO	International Civil Aviation Organization
IEC	International Electrotechnical Commission
IETF	Internet Engineering Task Force
ISO	International Organization for Standardization
ITU	International Telecommunication Union
NAFTA	North American Free Trade Agreement
NFPA	National Fire Protection Association
NGS	Non-Government Standard
NGSB	Non-Government Standards Body
NIST	National Institute of Standards and Technology
NTTAA	National Technology Transfer and Advancement Act
OMB	Office of Management and Budget
R&D	Research and Development
S&T	Science and Technology
SDO	Standards Development Organization
SSAWG	Standards Subject Area Working Group
TAG	Technical Advisory Groups
UL	Underwriters Laboratories
UN	United Nations
USNC	U.S. National Committee
US-VISIT	United States Visitor and Immigrant Status Indicator Technology
WTO	World Trade Organization



1.1 General Information on Standards

1.1.1 What Is a Standard?

While the Department and some other organizations distinguish between “standards” and “specifications,” most organizations use the generic term “standard” to refer to a wide variety of technical documents intended to establish common solutions to repetitive requirements. OMB Circular A-119 defines a standard as “common and repeated use of rules, conditions, guidelines, or characteristics for products or related processes and production methods and for related management systems practices.” According to OMB, a standard can be a “definition of terms; classification of components; delineation of procedures; specification of dimensions, materials, performance, designs, or operations; measurement of quality or quantity in describing materials, processes, products, systems, services, or practices; test methods and sampling procedures; or descriptions of fit and measurements of size or strength.”

1.1.2 What Is a Voluntary Consensus Standard?

Voluntary consensus standards are developed or adopted by domestic and international **Non-Government Standards Bodies** (NGSBs) in compliance with practices and procedures that include provisions requiring the owners of relevant intellectual property agree to make their intellectual property available on a nondiscriminatory and royalty-free (or for a reasonable royalty) basis to all interested parties.

The following standards are **not** voluntary consensus standards:

- Company standards, **de facto** standards, consortia standards, or other standards developed in the private sector but not through the full consensus process;
- Government-unique standards, which are developed by the government for its own uses but not through the full consensus process; or
- Standards mandated by law.

While the term “voluntary consensus standard” is widely used among standards developing organizations, industry, and government, the term has caused confusion and even created some resistance to their use. The term “voluntary” means the standard is voluntarily developed and the decision to use it is voluntary. However, once a voluntary consensus standard is placed on contract, cited as a requirement, or required by law or regulation, compliance is mandatory, not voluntary. The term “consensus” has led to the misperception that 100 percent agreement is required before a standard is approved. Consensus is defined differently by standards developers, but it is usually more than 60 percent and less than unanimity.

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1.1.3 What Is a Non-Government Standard (NGS)?

An NGS is a standard developed by a private-sector organization that plans, develops, establishes, or coordinates standards, specifications, handbooks, or related documents. NGSBs include professional, scientific, and engineering societies; dedicated standards bodies; trade associations; and international standards bodies. The Department uses the term “non-government standard” instead of voluntary consensus standard, partly to avoid the confusion noted above, but also because it is a broader term which includes consortia standards. As with voluntary consensus standards, NGSs do not include company standards or *de facto* standards.

1.1.4 What Are Consortia Standards?

Consortia standards are developed by companies or organizations which share similar strategic standardization goals, need to develop standards quickly to meet market demand, or are trying to harmonize or differentiate requirements in a specific industry. In 1990, there were comparatively few consortia standards; more recently, thousands more documents have been and are being created, particularly in the information technology and international cargo flow control arenas.

There is discussion in some federal agencies concerning the permissibility of using consortia standards and whether OMB Circular A-119 authorizes their use. While the Circular does not specifically address consortia standards, it clearly authorizes their use and gives them preference to government standards. The Circular states, “This policy does not establish a preference among standards developed in the private sector...This policy allows agencies to select a non-consensus standard developed in the private sector as a means of establishing testing methods in a regulation and to choose among commercial-off-the-shelf products, regardless of whether the underlying standards are developed by voluntary consensus standards bodies or not.”

However, notwithstanding the openness of the OMB Circular to consortia developed documents, DHS must understand the differences between consortia documents and voluntary consensus standards developed in a fully open environment. The DHS Standards Executive, in close consultation with the DHS Standards Council, may give consideration to such documents on a case-by-case basis. Keeping in mind that consortia standards may or may not be in the best interest of the United States as a whole, the Standards Executive will seek the advice of the DHS component(s) that are most knowledgeable and most affected by such documents.

1.1.5 Due Process

To some extent, most standards, including those in government, are developed following certain principles of due process. Due process, as applied to the development, approval, revision, reaffirmation, and cancellation of standards, means any stakeholder (organization, company, government agency, individual, and so on) has a right to participate by:

- Expressing a position and its basis,
- Having this position considered, and
- Having a right of appeal.

Due process allows for equity and fair play. The following are the criteria that define due process in NGS development. It is important to understand if, and to what extent, NGSB organizations adhere to these principles in the development of their standards, since it may affect participation decisions.

- **Openness.** Participation is open to all people directly and materially affected without unreasonable financial barriers. Voting membership on the standards body is usually not conditional upon membership in any organization nor unreasonably restricted by technical qualifications or other such requirements.
- **Lack of dominance.** No single interest category, individual, or organization dominates the standards development process. Dominance means a position or exercise of dominant authority, leadership, or influence through superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints.
- **Balance.** The standards development process has a fair and representative diversity of interests. NGSB organizations seek participants from diverse interests with the objective of achieving balance.
- **Notification of standards development.** The NGSB gives notification of standards activity in suitable media as appropriate to provide an opportunity for participation by all directly and materially affected individuals or organizations.
- **Consideration of views and objections.** An NGSB promptly considers the written views and objections of all participants.
- **Transparency.** The activities and documents of the development process are open and readily available to all participants, stakeholders, and interested parties.
- **Consensus vote.** The NGSB documents evidence of consensus in accordance with the requirements and procedures of the standards developer. NGSB participants are advised to review the bylaws to ensure balloting procedures are understood.
- **Appeals.** Written procedures contain an identifiable, realistic, and readily available appeals mechanism for the impartial handling of procedural complaints about any action or inaction. The NGSB addresses appeals promptly and makes decisions expeditiously. Appeals procedures provide for participation by all concerned parties without imposing an undue burden on them. Consideration of appeals is fair and unbiased and fully addresses the concerns expressed.
- **Written procedures.** Written procedures govern the methods used for standards development and are available to any interested individual or organization.

1.2 Purpose

The purpose of this document is to promote effective use of non-governmental standards within the Department of Homeland Security. This document addresses the participation of DHS employees and contractors in the development of these standards. To achieve this purpose, this document:

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- Describes the different types of NGSs and the organizations that develop them,
- Provides general guidance and practices relative to DHS' involvement in developing or using NGSs,
- Identifies criteria which should be considered regarding requirements and verification before developing an NGS or replacing an existing federal document with an NGS,
- Clarifies the roles and responsibilities of DHS personnel and non-DHS personnel executing DHS funded programs when participating in NGS activities, and
- Explains the meaning and importance of DHS adoption of an NGS.

This document provides guidance to five key stakeholders:

- DHS participants and their leadership, so that they may have a more thorough understanding of NGSBs and their roles and responsibilities as participants in NGSB activities,
- Non-DHS personnel and their management who are engaged in standards development activities funded by DHS,
- Those involved in DHS funded grant programs, including administrators, procurement officials, and end-users of equipment,
- NGSBs, so that they might better understand DHS' practices and policies, especially related to the DHS standards adoption process. NGSBs will gain understanding of the needs for standards by the components and customers of DHS and learn how to interface with DHS in the development, adoption, and use of NGSs, and
- Private sector concerns involved in DHS matters and related standards development activities, so that they may consider the homeland security market in their application of research and development (R&D) investment and the development of dual-use products.

1.3 History

The Department of Homeland Security was created by the Department of Homeland Security Act of 2002 as a direct result of the terrorist attacks against the United States on September 11, 2001. The Act brought 22 agencies with major homeland security responsibilities into a unified organization that was given the primary objective of securing the homeland against terrorist activities. DHS began official operations on March 1, 2003 with the transfer of the United States Customs Service, the United States Secret Service, and the Federal Law Enforcement Training Center into its domain and the establishment of several directorates including a Science and Technology (S&T) Directorate.

In accordance with OMB Circular A-119 on June 11, 2004, Secretary Tom Ridge designated a department wide Standards Executive who currently resides in the Science and Technology Directorate².

² The following is the pertinent excerpt from Secretary Ridge's letter to Secretary of Commerce Donald Evans. Certain titles in the letter have changed but the title of Standards Executive remains:

The responsibility for coordinating all standards activities in DHS has been assigned to the Under Secretary for Science and Technology. The Standards Executive for DHS is the Portfolio Manager for Standards who reports to the Assistant Secretary for Science and Technology.

1.4 Federal Policy

Unlike most foreign governments, the U.S. Federal Government neither operates nor finances an official national standards body, notwithstanding the National Institute of Standards and Technology (NIST). However, the Federal Government, with the strong support of the private sector, is an important player in the standards process as a user, regulator, and contributor. The Federal Government is concerned that the process for developing standards be transparent, fair, and effective for all concerned and that it represent U.S. interests effectively.

The NTTAA (Public Law 104-113) and the OMB Circular A-119, “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities” (1998), direct federal agencies to use voluntary standards in lieu of governmental standards whenever feasible. The legislation asks Agencies to promote participation by their personnel in standards development to ensure the standards created are usable by both federal agencies and the private sector.

OMB Circular A-119 gives the Standards Executive of an Agency the following duties:

- Establishing procedures to ensure that agency representatives who participate in voluntary consensus standards bodies will, to the extent possible, ascertain the views of the agency on matters of paramount interest and will, at a minimum, express views that are not inconsistent or in conflict with established agency views.
- Ensuring that the agency’s participation in voluntary consensus standards bodies, to the extent possible, is consistent with agency missions, authorities, priorities, and budget resources.
- Ensuring, when two or more agencies participate in a given voluntary consensus standards activity, that they coordinate their views on matters of paramount importance so as to present, whenever feasible, a single, unified position and, where not feasible, a mutual recognition of differences.
- Cooperating with the Secretary in carrying out his or her responsibilities under this Circular.
- Consulting with the Secretary, as necessary, in the development and issuance of internal agency procedures and guidance implementing this Circular, including the development and implementation of an agency-wide directory identifying agency employees participating in voluntary consensus standards bodies and the identification of voluntary consensus standards bodies.
- Preparing, as described in Section 9 of the Circular, a report on uses of government unique standards in lieu of voluntary consensus standards and a report on the status of agency standards policy activities.
- Establishing a process for ongoing review of the agency’s use of standards for purposes of updating such use.
- Coordinating with appropriate agency offices (e.g., budget and legal offices) to ensure that effective processes exist for the review of proposed agency support for, and participation in, voluntary consensus standards bodies, so that agency support and participation will comply with applicable laws and regulations.

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The desired outcome of these duties is to:

- Greatly reduce or eliminate the cost of developing standards that serve the national needs.
- Decrease the cost of goods procured by DHS and its customers, while encouraging the growth of U.S. industry by enabling multiple vendors to produce the goods and services required to protect the homeland through openly available standards.
- Gain access to a wider audience of subject matter experts by working with both public and private sector organizations that have homeland security interests.
- Further the policy of reliance upon the natural incentive of the private sector to supply government needs for goods and services.

The NTTAA designates NIST with coordination of the efforts of the agencies to meet statutory requirements and to report annually on federal use of standards.

1.5 DHS Policy

The overarching DHS Policy on Standards is found in the Homeland Security Act of 2002 (Public Law 107-296) Section 102(g):

“All standards activities of the Department shall be conducted in accordance with 12 (d) of the National Technology Transfer Advancement Act of 1995 (15 U.S.C. 272 note) and Office of Management and Budget Circular A-119.”

The policies articulated in this section help to bridge the Department’s overarching standards policy with the activities of the operational elements and major programs in the context of NGSs and NGSBs. The DHS policy for NGS participation is to use NGSs and to participate in NGSBs in order to:

- Foster the acceptance of standard practices in support of national initiatives (e.g., the National Incident Management System (NIMS) and the National Preparedness Goal) that enable first responders and other homeland security professionals to be able to implement a preparedness and response system that includes a common language and standard operating procedures;
- Work closer with the private sector to foster the building of better and more interoperable commercially developed technologies and products; and
- Increase the range of commercially available equipment by giving preference to performance standards (when they satisfy requirements) in lieu of prescriptive standards, thus creating the potential for lower procurement and long-term maintenance costs.

The Department is committed to increased productivity in all phases of the product and systems development cycle and improved acquisition efficiency. Standards and related documents, e.g., guidelines, play an important role in this context and must be selected and properly applied with this objective in mind. Within the acquisition environment, using NGSs is more economical than developing DHS-unique standards and it promotes development of dual and multi-use technology.

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Using NGSs frees scarce DHS resources for use on other priorities. DHS use of an NGS may include directly using the NGS document in acquisition for DHS procurement actions or in grants programs, referencing the NGS in a government document, or reproducing portions of the NGS, with permission, in a government document.

The Department is not the only beneficiary when it uses NGSs. The NGSBs also benefit from DHS adoption and use of their documents. Scientists and engineers within the headquarters and operational elements of DHS, many of whom are leaders in their fields, offer valuable contributions through their participation in NGS development. The leveraging that occurs when DHS experts come together with experts from laboratories, manufacturers, users, academia, consumers, and others to cooperatively apply their knowledge ultimately benefits to the security of the nation. The result is a better standard than any of these groups could have produced independently. Its value is measured by the agreements documented, the consensus achieved, and the intellectual property recorded.



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2.1 Types of Non-Government Standards Bodies

NGSBs are private-sector organizations that plan, develop, establish, or coordinate standards. There are many kinds of organizations with a variety of different membership, voting, standards development, and funding models. These variations are often reflected in the manner in which these organizations produce standards. In general, NGSBs come under one of four categories:

- Trade associations,
- Professional societies,
- Standards Developing Organizations, and
- Consortia.

Some NGSBs develop standards intended only for a very narrow application by their members, some organizations develop standards intended for application in specific geographical areas, and some NGSBs develop standards intended for the global market. Most NGSBs operate by some form of a consensus process, which typically requires a defined degree of openness, balance, due process, general agreement, participation of interested and affected parties, and a formal process for attempting to resolve differences of opinion. The process of developing standards is usually governed by written procedures covering each step of the process. Consortia and trade associations typically are more restrictive with regard to openness, may not allow certain kinds of representatives to participate, and may not allow all participants to vote. At the other extreme, some standards developers allow any interested party to participate without qualification, have strict rules concerning balance of different types of participants (users, producers, general interest), and may require a certain balance in the voting in order to approve a standard. While the processes used by NGSBs may vary, the standards produced by each method have benefits, and most importantly, they meet the needs of their constituents. It has not been demonstrated that one form of standard development produces an inherently superior standard. The Department uses standards that meet its needs, irrespective of the standards development process. For a list of NGSBs that have a scope of work and interest that may intersect with homeland security needs see Appendix.

NGSBs provide the infrastructure for preparing standards. In the standards development process, government personnel participate in NGSB activities along with representatives from industry, academia, other organizations, and individual consumers. NGSBs are private-sector organizations operating under their own rules; the Federal Government is simply one of several stakeholders and participants in their processes.

The NTTAA and OMB Circular A-119 encourage the participation of federal representatives in NGSBs to increase the likelihood the standards they develop will meet both public- and private-sector needs. Government agencies, manufacturers, consumers, buyers, retailers, testing laboratories, technical experts, and other interested parties (including individuals) from the United States and many other countries participate in the system.

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2.2 Trade Associations

There are approximately 1,200 trade associations in the United States. A meaningful segment is active in the standards development arena. Those that do choose to participate can have a significant impact on their industry sector. The Telecommunications Industry Association, and Electronic Industries Alliance are organizational examples of manufacturers, suppliers, customers, service providers, and other firms active in a given industry sector that do take an active role in standards development. Associations such as these deal with mutual business interests and promote the industry and its products. To address their objectives, many of the active trade associations develop standards for the products manufactured by their members, although some concentrate on developing standards for products used by their industries. Since a trade association exists to support its membership and the industry or “trade” it represents, government participation in the standards development activities of a trade association may be restricted because the government is not a member of the association. However, standards development activities in trade associations are often conducted in accordance with the due process, openness, and balance procedures which give government representatives an equal voice, and many, if not most, standards writing trade associations are accredited by ANSI. While it is preferable that government representatives have an equal voice, participation may well be beneficial to the government even under the more restrictive circumstances of these organizations.

2.3 Professional Societies

Professional societies are individual membership organizations. For example, the American Society of Mechanical Engineers (ASME International) and the Institute of Electrical and Electronics Engineers are societies that support the practice and advancement of a particular profession. Generally, professional societies promote the interests of their professionals. A society of a specific kind of engineer may help advance a field of engineering, continue the education and professional development of those engineers, and support development of new engineers entering that field. In addition to these altruistic goals, several professional societies, particularly those organizations in the engineering disciplines, develop technical standards. Many are accredited by ANSI as operating in full compliance to openness, due process, balance, and transparency.

Participants in standards committees usually serve as individual professionals or as representatives of their organizations. As a practical matter, individuals who participate at the expense of their organization may be expected to reflect the interests of their organization, irrespective of the society’s official position. Similarly, when a government agency is funding participation, the government employee or support contractor must participate as a representative of their agency, and not as an individual.

2.4 Standards Developing Organizations

A few NGSBs, such as ASTM International (formerly the American Society for Testing and Materials), were specifically founded to develop standards and are categorized as standards developing organizations (SDOs). Membership in an SDO is not limited to a particular industry or profession. Membership fees are generally low, facilitating participation by individuals not sponsored by an

³ ANSI accreditation signifies that the procedures used in the development of evidence of consensus meet ANSI’s requirements for openness and due process.

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employer. SDOs typically operate with little bias in the standards development process. There may be specific committees with some degree of bias, but rules governing balance do a good job of policing and limiting such bias. One benefit of an SDO is the opportunity to embark on standards development in virtually any field of endeavor when sufficient interest is expressed by users, producers, and other interested parties. Another benefit is the very strict balance and due process requirements for standards development, voting, and appeal. However, these same benefits can become stumbling blocks to rapid development of standards. Because SDOs allow for participation by virtually anyone willing to pay the membership fee, participants with no real stake in the outcome may become involved in the development process. While this open participation practice often benefits the content of the resulting standard, it can also be detrimental to the overall flow of the process. Government participation in standards development is exactly the same as for any other participant. Government members pay their appropriate fees and participate in the standards development as full partners in the process, including preparing drafts, commenting on drafts, and voting on final standards.

2.5 Testing and Laboratory Organizations

Some organizations, such as Underwriters Laboratories (UL) and Intertek, may provide services such as testing products to their standards or to other standards. The standards these types of organizations develop generally focus on the area of expertise of the organization; for example, UL is predominantly dedicated to safety, so most of their standards focus on the safety of products. Often, in both the standard and the testing, they focus only on the safety aspects with little or no attention to product function or performance. However, these organizations may also develop standards that do cover product attributes, function and performance. The user needs to be aware of the purpose of the particular standard and then use it appropriately. Government participation may or may not be invited in the development of standards by such organizations. When possible, DHS activities may find it beneficial to be involved in such standards development work and should seek to be involved as a full participant.

2.6 Industry Consortia

Companies or organizations which share similar strategic goals need to develop standards quickly to meet market demand, or are trying to harmonize or differentiate requirements in a specific industry may form consortia to develop such standards outside of traditional standards bodies. In some cases, the standards are published by the consortia and for the consortia; in other cases, the group may seek wider acceptance by introducing the standards into a more conventional process through partnership with an NGSB. Consortia clearly act in the best business interests of their members. Sometimes those interests coincide with DHS interests or at least, are not in opposition to DHS interests. The Department may use consortia-developed standards, but should remain wary of their impact on homeland security needs. When allowed by the consortia, it may be appropriate and beneficial for DHS to participate in the document development.

DHS must keep in mind that the goal of industry consortia is maintaining the self-interests of their membership. Often, consortia members are fierce competitors in the marketplace. However, under the umbrella of the consortium, they work together on shared concerns with an eye to increasing the profitability of their product line. The companies recognize that collaboration, often on technical issues, makes good business sense in well-defined areas where technology leads to no customer differentiation

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and sometimes areas where R&D serves a societal good. In both situations working together avoids duplication of effort, thus realizing the goal of increased bottom line profit of the membership.

Since there are so many consortia, each with its own set of rules, it is impossible to generalize about their standards development process. Potential government participants must work with individual consortia when participation might be beneficial to determine its membership, participation, voting, and standards availability rules and determine on a case-by-case basis whether participation would be beneficial and would not violate any federal, state or local laws or regulations concerning conflicts of interest or antitrust issues.

2.7 American National Standards Institute

The American National Standards Institute (ANSI) is a private, nonprofit organization that oversees the standards and conformity assessment system in the United States, and represents the needs and views of U.S. stakeholders in standardization forums around the globe. ANSI's membership comprises government agencies, organizations, corporations, academic and international bodies, and individuals. In total, the Institute represents the interests of more than 125,000 companies and 3.5 million professionals.

Though ANSI itself does not develop standards, the Institute facilitates the development of American National Standards (ANS) by accrediting the procedures of SDOs, i.e., NGSBs. ANSI accreditation signifies that the procedures used by these bodies meet the Institute's essential requirements for openness, balance, consensus, and due process. Currently, more than two hundred active SDOs are accredited under the document *ANSI Essential Requirements: Due process requirements for American National Standards*. Approximately 10,500 American National Standards carry the ANSI designation.

The Institute also administers accreditation programs for product and personnel certification bodies and the registrars of quality and environmental management systems. ANSI's accreditation programs themselves are created in accordance with international guidelines as verified by government and peer review assessments.

In the international arena, ANSI promotes the use of U.S. standards abroad, advocates U.S. policy and technical positions in international and regional standards organizations, and encourages the adoption of international standards as national standards where appropriate. The Institute is the official U.S. representative to the two major international standards organizations, the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC), via the U.S. National Committee (USNC).

Through ANSI, the U.S. has immediate access to the ISO and IEC standards development processes. ANSI and the USNC frequently carry U.S. standards forward to ISO and IEC where they are adopted in whole or in part as international standards. U.S. positions are developed by U.S. Technical Advisory Groups (TAGs) that have been accredited by ANSI or approved by the USNC. Participation in a U.S. TAG is open to all affected stakeholders.

Through its standards panel program, the Institute provides standards-based solutions to national and international priorities. ANSI currently administers five standards panels in the areas of homeland security, nanotechnology, biofuels, healthcare information technology, and identity theft prevention

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and identity management. Each of the panels works to coordinate and harmonize U.S. standards and conformity assessment activities relevant to each panel's area of focus⁴.

The ANSI Homeland Security Standards Panel (HSSP) was launched in February 2003 with the mission to identify existing consensus standards, or, if none exists, assist DHS and those sectors requesting assistance to accelerate development and adoption of consensus standards critical to homeland security. The ANSI-HSSP promotes a positive, cooperative partnership between the public and private sectors in order to meet the needs of the nation in this critical area. Specific homeland security issues are addressed via ANSI-HSSP plenary meetings and workshops, in close collaboration with the DHS S&T Test & Evaluation and Standards (a member of the ANSI-HSSP Steering Committee). These workshops bring together subject matter experts to

- Identify existing standards and conformity assessment programs,
- Determine where there are gaps, and
- Make recommendations for addressing these gaps.

Subject matter experts from DHS are strongly encouraged to actively engage in the work of the ANSI-HSSP⁵.

2.8 Non-U.S. Regional Standards Organizations

To this point NGSBs have been categorized primarily by the types of memberships they serve, such as trade associations or professional societies. A different way to categorize NGSBs is by their geographic participation and sphere of use. For example, national standards organizations are ones that generally limit participation to citizens within a country or whose standards are usually only used within that country. The U.S. leads the world in the number and variety of national standards organizations, but most countries in the world have at least one national standards organization.

There are also regional standards organizations that develop standards for use by countries within a defined geographic region, usually for the purpose of facilitating trade among neighboring countries. Such organizations may be largely restricted to a continent, such as the European Committee for Standardization. Other organizations are hemispheric, such as the Pan American Standards Commission. Still other organizations cut across continents and oceans, such as the Pacific Area Standards Congress.

The Department has no restrictions on the use of non-U.S. national or regional standards. DHS will consider citing or adopting non-U.S. national or regional standards as requirements. Normally, this action will be considered for interoperability or trade purposes (such as the North American Free Trade Agreement, NAFTA) or when there is no corresponding U.S. or international standard to describe the requirement. DHS participates on these types of international bodies in different ways, depending on the structure and operating procedures. For example, Customs and Border Protection (CBP) scientists participate on NAFTA Methods Committees that develop test methods for goods of international trade. These standard methods are used by the NAFTA member nations to test commodities imported

⁴ Additional information is available at <http://www.ansi.org>.

⁵ Additional information is available at <http://www.ansi.org/hssp>.

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into their country from anywhere in the world. Such methods are needed, since the tariff treatment affecting the product can be significantly different from the way even the industry related to the product treats it, thus requiring a special, often unique, test method.

2.9 International Standards Organizations

Defining what constitutes an international standard and the organizations that produce them is not a simple matter. Under the World Trade Organization (WTO) Agreement on Technical Barriers to Trade, many national governments and many global companies state a preference for international standards; thus, the definition is more than an academic exercise. With the designation as an international standard comes important trade, regulatory and global competitiveness implications, and so the definition has become a contentious and confusing issue.

Some contend that the only private sector international standards organizations are ISO and IEC since they are the only organizations where each country is represented by its national standards organization. However, there are many other international standards organizations. The International Commission on Illumination (CIE), for example, has produced global lighting standards for over 90 years. These standards impact DHS and its components. For example, any DHS laboratory seeking to gain or maintain an accreditation based on ISO 17025 (e.g., the CBP laboratories) must use a CIE lighting specification to be in conformance in order to maintain their accreditation⁶. The Internet Engineering Task Force (IETF) is an international organization with a large number of participants from around the world which sets the standards for the Internet. DHS components involved in land mobile radio communications are impacted and have participated in standards activities of the IETF.

There are also several international organizations created under the auspices of the United Nations (UN) which produce standards, including the International Telecommunication Union (ITU), the International Civil Aviation Organization (ICAO), the International Atomic Energy Agency, the International Maritime Organization, the World Health Organization, the Food and Agriculture Organization, and the World Customs Organization. For the most part, these organizations would be considered more government standards developers than NGSBs, since they are UN-chartered organizations that require official government representation for “official” positions on standards. But all of these organizations rely heavily on private sector expertise in the development of their regulatory standards and, in some cases, even provide a forum for the development of private sector voluntary standards. For example, ITU has over 600 private-sector members that not only contribute to the development of mandatory standards, but also develop international voluntary standards for the telecommunications industry.

In the case of UN-chartered organizations, the designated Federal Government agency coordinates the U.S. position on a standard with DHS as well as any other affected government agencies. Depending on the subject matter of the standard, the DHS position should carry significant weight in deciding the U.S. position in the international forum. As an example, standards affecting international travel

⁶ It should be noted that accreditation by the American Society of Crime Laboratory Directors – Laboratory Accreditation Board (ASCLD-LAB) is ISO 17025 based. Therefore, any DHS forensic laboratory seeking such accreditation will also have to conform to CIE specifications.

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documents, e.g., electronic passports, and the biometrics related to these are of critical importance to the security of the United States. ICAO has been influential in developing standards for these types of documents. Therefore, the participation of DHS components, such as US-VISIT (United States Visitor and Immigrant Status Indicator Technology), which proactively advocate the U.S. position is an appropriate and critical responsibility of DHS. Several standards developed by such organizations, particularly ICAO, are applicable to DHS needs and will be considered for adoption by DHS when completed.

Other DHS components have technical experts who participate on the TAGs established by ANSI in order to develop a U.S. position on standards activities and ballots for the appropriate technical committees of ISO and IEC. TAG participation is particularly noteworthy for DHS components, since they will directly and significantly impact international standards. Having international standards that are enablers in pushing-out the borders of the United States to other countries will be beneficial to securing the homeland of the United States.

In recent years, several standards organizations that originated as national standards organizations have changed their names to reflect their international membership and global use of their standards. Some examples include ASME International, ASTM International, National Fire Protection Association (NFPA) International, and the Society of Automotive Engineers International. Standards produced by these four organizations are some of the most important to DHS and its operating elements. NFPA International's Standard NFPA 1600 "Standard on Disaster/Emergency Management and Business Continuity Programs (2004)"⁷ is a high level document upon which more specific standards for disaster event management are being developed. One of these more specific documents is FEMA⁸ 501, The National Incident Management System. ASTM International has created a new Committee, E-54 on Homeland Security Applications⁹, specifically to address the homeland security mission. Some producers and users of standards, however, question whether these organizations truly produce international standards or whether these name changes are merely marketing strategies. Notwithstanding the fitness of their "international" label, organizations such as these four produce many standards that become American National Standards that are fed into and become the position of the U.S. TAGs.

In an effort to resolve the debate over what constitutes an international standard, the WTO established criteria which essentially state that a standard may be considered international if the membership in the developing organization is open to at least all of the members of the WTO. In addition, the standards must be developed following procedures to ensure transparency, openness, impartiality and consensus, effectiveness and relevance, coherence, and to address the concerns of developing countries. The WTO criteria have not ended the debate for what constitutes an international standard, but they have provided a framework for discussion. Furthermore, documents developed in an environment such as that described by the WTO have generally been written by subject matter experts and subsequently considered, debated, and thoroughly vetted by vendors, users, stakeholders and all parties interested in the topic at hand.

⁷ The text of the 2007 Edition of NFPA 1600 can be found here: <http://www.nfpa.org/assets/files/pdf/nfpa1600.pdf>.

⁸ Federal Emergency Management Agency

⁹ Additional information available at <http://www.astm.org/COMMIT/SUBCOMMIT/E54.htm>.

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While the geographic origins and designation of a standard may have important implications in regulations and trade, for DHS the designation of a standard as international, global, regional, national, or local is not of critical importance. What is important to DHS is that a standard meets the operational requirement of the DHS component or customer; is technically accurate, current, and available; fosters interoperability; does not hinder backwards compatibility (game-changing innovation notwithstanding); is developed in an open forum that allows for broad participation; and is recognized and used by the pertinent segment of its field.



3

DHS PARTICIPATION IN NGSBs

DHS PARTICIPATION IN NGSBs

DHS personnel are encouraged to participate on NGS standards developing committees to promote standards that meet DHS needs. DHS personnel should not participate in matters related to the internal governance of an NGSB. If DHS representation at an NGSB meeting is not possible, participation through correspondence, online capability, telephone, or other means is acceptable. Participation in NGSBs by DHS components does not connote DHS agreement with, or endorsement of, decisions reached by such organizations, or that DHS will eventually adopt an NGS document.

A number of employees of other Federal agencies are presently supporting DHS standards related activities. When they are acting as a DHS representative their actions are guided in the same way as those of DHS personnel. In working with NGSBs their affiliation and participation must be clearly understood and when appropriate, made public.

Currently DHS has no registry of NGSB participants, but the Department urges that participants inform the Test & Evaluation and Standards Division of their involvement either directly or through their component's representative to the Standards Council. This will help in obtaining accurate information when DHS has to prepare their contribution to the NTTAA report¹⁰. It is anticipated that DHS staff members either are active or will be active participants on technical committees, working groups, etc., of NGSBs and will likely hold leadership positions within these organizations. Furthermore, participation in the development of non-government standards should be encouraged throughout the Department as these standards provide many benefits to DHS, including the following:

- Ensuring DHS interests are met, by influencing the content of standards;
- Representing DHS “customer” interests in standards;
- Promoting interoperability;
- Providing DHS access to dual and multi-use products in accordance with NGSs;
- Keeping DHS abreast of new technologies;
- Expediting DHS access to information about new industry developments;
- Gaining insight into new market directions and future market trends;
- Learning from both manufacturers and end users;
- Promoting vendor competition and providing a broad base of suppliers;
- Reducing product cost;
- Reducing standards development cost; and
- Reducing standards maintenance burden and cost.

By being involved with NGSBs, DHS can communicate information concerning homeland security needs early in the NGS development cycle. Today, more than ever, the ability to influence standards

¹⁰ The NTTAA report is an annual report that provides data to the OMB on federal agencies' use of voluntary consensus standards and conformity assessment. Reports may be found at <http://ts.nist.gov/Standards/Conformity/pubs.cfm>.

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that support technology transition into products that are force multipliers in securing the homeland is of paramount importance.

DHS participates in standards work for the same reasons that other government agencies and businesses do. Standards help any enterprise work more efficiently and serve its customers better. Businesses participate in the standards process to influence the evolution of standards, to define prudent practices for their business sector, and to acquire early knowledge of developments in their field.

3.1 DHS Representation on NGSBs

Representatives involved in NGSB activities should participate actively and on an equal basis with other members in a manner consistent with the procedures of those bodies, particularly on matters such as establishing priorities; developing procedures for preparing, reviewing, and approving standards; and developing or adopting new standards. DHS representatives should always be aware that they are representing the positions of their particular agency of the Federal Government. Again, the participation should be reported to the DHS Test & Evaluation and Standards Division, and the roles of non-DHS personnel engaged in DHS sponsored standards activities must be clearly understood by all parties.

The number of individual DHS representatives in a given NGS development activity should be kept to the minimum required for effective representation of program, technical, or other concerns. In some cases, one person with sufficient technical expertise and product knowledge may participate; in other cases, DHS may have several representatives. If more than one DHS component has a vested interest in the work of a particular NGSB, it would be reasonable for each component to have representatives on the body. The rules of the NGSB will establish the number of votes DHS representatives will be allowed to cast.

DHS representatives should participate actively in NGS committees, be fully involved in discussions and technical debates, register opinions, and, if selected, serve as chairpersons or in other official capacities. However, OMB ethics policies distinguish between technical and managerial leadership in private-sector organizations. Technical activities such as serving as a project editor or as a committee chairperson are permissible. Managerial assignments including approving budgets, making financial decisions, or engaging in other “business” activities of the standards group should be declined.

3.2 Criteria for Participation

It is not always necessary for DHS to have active participation in NGS committees. If a product, process, or technology covered by an NGS is suitably stable, meets DHS requirements, is not used in critical applications, and is unlikely to see dramatic changes in industry, DHS participation may not be necessary. However, DHS should participate on NGS development working groups when one or more of the following criteria are met:

- DHS has a significant interest in the practices, processes, or products covered by the document;
- DHS has requirements the NGS must accommodate to be usable by DHS components;

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- The practices, processes, or products covered by the document are used in critical applications; or
- To stay informed about new technical developments in the subject matter area and to influence the direction of standards early in the process.

3.3 Participants' Responsibilities

DHS participation in NGS activities includes assuming a variety of the responsibilities synopsized in Table 1. The table could be sub-titled “Know Your Non-Government Standards Body.” The coloring in the table differentiates activities that typically happen outside of a meeting (yellow), and those that occur during a meeting (green).

3

Table 1: Recommendations for Non-Government Standards Body Representatives

1	Follow protocol and procedures	Know the rules by which the group operates.
2	Seek leadership positions	Accept leadership of a technical project or agree to represent the group to another standards body. Doing so improves credibility and demonstrates leadership.
3	Attend meetings regularly	Be early, Introduce yourself, Be courteous, Be attentive, Be proactive, and Position yourself for networking, observing, and exerting influence when appropriate.
4	Be prepared	Know your subject matter and the DHS position. Know when to weigh in on the conversation. Set goals but have a few alternatives in mind. Learn the language (jargon) and acronyms used by the committee by reading the technical literature and listening carefully. Dress according to the fashion of the group.
5	Know DHS policies	Become familiar with, and be prepared to articulate, DHS' positions on major policy issues relating to the entire life cycle of acquisition, from selecting standards, specifications, and requirements, to acquisition and logistics. Avoid expressing personal opinions on significant policy issues, as others may construe your personal opinion to be official. Headquarters staff can give advice on policy and procedural matters, if necessary.

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6	Present the official position	Represent the official DHS position, even if it is at odds with personal views. Similarly, when representing the United States in an international group you must support the national position.
7	Promote consensus-based behavior	Promote consensus-based behavior with all team members. Consensus is the key to developing a successful accepted standard. Participants should advance and protect DHS' interests throughout the committee's deliberations. <i>Consensus does not mean unanimity.</i>
8	Seek consensus	Participants should seek support for DHS' position among the other members of the group, in advance, if appropriate. Success requires knowing the other representatives and finding additional reasons for them to support DHS' position.
9	Vote	Voting participants should cast a ballot, even if it is an abstention vote, at each stage of standards development and on actions arising in the normal course of participation in NGSBs. Several NGSBs have quorum requirements that can delay the progress of documents if insufficient ballots are cast.
10	Keep good records	Prepare thorough, yet concise, meeting reports; follow up with appropriate staff; analyze issues; and distribute reports appropriately. Maintain a file of committee-related information, including the committee's by-laws, membership lists, final ballots, relevant correspondence, and minutes of meetings.
11	Take training	Many NGSBs offer training to its officers and members on how to participate on their committees and work groups. NGSBs operate under common practices, e.g., Robert's Rules of Order. To be effective, take training opportunities to become familiar with these common practices. ANSI and several NGSBs periodically offer courses on effective participation as well as specific operating procedures.
12	Keep management and interested parties informed	Keep supervisors informed of significant developments, both technical and policy-oriented, that occur at committee meetings. Facilitate communication or coordination of new or modified standards throughout the organization and elsewhere in DHS when affected parties may have a need to know about the standards.

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Participants must become familiar with the purpose, organization, structure, and operating procedures of the NGSB. In addition, because it may be relevant to later agency deliberations about the use of the standard or other document, participants should determine whether the committee:

- Is balanced;
- Follows agreed-on procedures (including transparency and due process);
- Maintains openness; and
- Operates by consensus.

ANSI accreditation is one indication that the NGSB follows these procedures. Participants in standards committees should review the purpose and scope of each particular activity and should seek clarification of any ambiguities. Participants should also be aware that restriction of competition through the use or abuse of standards procedures is improper and violates various federal and state antitrust statutes; such violations are subject to civil and criminal prosecution.

3.3.1 Participating

When serving as a member of an NGSB, DHS representatives should participate actively, and on an equal basis with other members, consistent with the procedures of that body, particularly in matters such as establishing priorities; developing procedures for preparing, reviewing, and approving standards; and developing or adopting new standards. Active participation includes being fully involved in discussions and technical debates, and registering opinions. Participation will generally involve onsite face-to-face meetings and email exchanges, and to a lesser extent, teleconferences, video-teleconferences, and Internet/intranet communication.

Early in the process participants should make DHS requirements known to the standards writing committee, subcommittee, or working group and, when appropriate, should obtain that body's agreement to have the needs of DHS accommodated in the document by inclusion, reference, or other suitable means. DHS representatives should make every effort to ensure that these needs are reflected in documents as written rather than trying to federalize an NGS at a later time with special regulations or rules. To do this, it may be necessary to seek inclusion of a "when specified" paragraph to accommodate DHS requirements without adversely affecting other uses of the document. This inclusion makes the document more readily adoptable by DHS (see section 4).

3.3.2 Voting

Participants should vote in accordance with the procedures of the NGSB unless prohibited from doing so by law, by their agency, or by the rules of the NGSB. However, participants should abstain when there is a conflict of interest for DHS, their agency, or the individual representative. Participants should vote in accordance with the procedures of the NGSB unless prohibited from doing so by law, by their agency, or by the rules of the NGSB.

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3.3.3 Leadership Positions

It is appropriate to seek leadership when the technical work of an NGSB, a sub-committee, or a working group is particularly critical to the needs of the participant's agency. The NGSB leadership is in a position to affect the speed of the standards development process. They are often charged with the resolution of negative votes, which is required to reach the point of consensus prior to the acceptance and ultimate publication of the standard. DHS representatives may participate in the policymaking process of the NGSB, but only in matters such as establishing priorities; developing procedures for preparing, reviewing, and approving standards; and creating NGSs. Those in leadership positions must take care not to become involved in decision-making in the internal day-to-day management of the NGSB, *e.g.*, selection of salaried officers and employees, establishment of staff salaries, fundraising matter and other administrative policies.

Many NGSBs offer training courses for their officers and committee members. Some are required for officers. In addition, ANSI offers a number of helpful training programs.¹¹

3.4 Funding Participation

To support ongoing activities, most NGSBs require all participants, industry and government alike, to pay a fee for taking part in the document development process. In accordance with the provisions of OMB Circular A-119, DHS representatives who participate at government expense do so as representatives of DHS or their agency. When a DHS component pays administrative, participation, or membership fees for individual representatives, the component retains the right to select the primary representative and, when necessary, substitute an alternate. Even though an individual may be named as the principal participant and receive benefits of participation, the fee has been paid by the component to have a representative involved in NGS efforts. Components reserve the right to designate the individual who can most appropriately represent their interests in NGS efforts. It should be noted that any benefits of participation accrue to the component rather than the individual representative. Lastly, there is no policy or law that precludes a DHS employee from joining and participating in any NGSB at her/his own expense.

3.5 Organizational Membership

Sometimes it is in the best interest of DHS or a component to acquire organizational membership in an NGSB. In making membership decisions, the organization could consider the benefits to DHS such as free or discounted publications, technical reports, voting privileges, and participation on executive and planning boards.

3.6 DHS Support to a NGSB

The total amount of DHS or component support to an NGSB should be commensurate with the value derived from participation but in general should be no greater than that of equivalent private sector participants in that activity. It would be appropriate to exceed this limit when it is in the best interest

¹¹ Additional information is available at <http://www.ansi.org>.

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of DHS to develop or revise a standard, when its development or revision is needed quickly, or when it is unlikely to occur at all without the added support. DHS support, subject to legal and budgetary authority, may include the following:

- Direct financial support (*e.g.*, memberships or contracts to develop a standard for DHS);
- Administrative support (*e.g.*, hosting of meetings or secretarial functions);
- Technical support (*e.g.*, cooperative testing for standards evaluation or participation of DHS staff in the activities of standards development groups);
- Joint planning with NGSBs to facilitate a coordinated effort in identifying and developing needed standards; and
- Participation of DHS or contractor personnel in standards development activities.

3.7 Legal and Ethical Issues

Standard setting is a critical process affecting the ability of DHS to achieve its mission. Standard setting provides DHS and its component organizations an opportunity to shape standards relating to products, processes, or services, that offer consistency in operations among those components organizations and with all relevant public and private entities with which DHS may interact in the performance of its missions, either planning for or responding to man-made or natural disasters. The DHS interest in standard setting is to assure an open, transparent, merit-based adoption of standards, the implementation of which will best serve the public interest and are most useful in DHS' performance of its missions. Representatives expressing the DHS position in a standard setting process must be a Federal employees.¹²

DHS representatives should be aware that a corporation or other entity whose technology is adopted as a result of a standard setting process benefits economically. Where authoritative standards exist, entities in the same industry are likely to subscribe to the standard, perhaps substantially increasing the market for products based upon the adopted technology. Before the adoption of a standard, a given technology must be forced to compete on the open market against all others.

DHS should not intervene in this market effect other than to ensure that pretenses are not extended to one technology provider over another except on the basis of technical merit. DHS representatives should seek to identify non-proprietary technologies to the extent that those technologies can satisfy need for which the standard is to be adopted.

DHS staff authorized by their organizations to represent DHS in a standard setting process should be particularly conscious of the following potential issues and seek counsel so as to avoid any taint on their role personally or their representation of DHS.

¹² Specific guidance on the use of commercial services to support participation in NGSBs is beyond the scope of this document. Additional information on commercial and inherently governmental activities may be found in OMB Circular A-76 and the Office of Federal Procurement Policy Letter 92-1.

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3.7.1 Intellectual Property Rights Infringement

Also, DHS organizations and representatives should be aware that, though rare, invoking or using a standard may involve a claim of intellectual property infringement by an owner of all or a part of an adopted technology. Should there be any doubt about expected conduct the employee should seek advice from DHS Counsel and, in some cases, specifically DHS Intellectual Property Counsel.

3.7.2 Conflicts of interest

DHS representatives must avoid any perception that he/she will benefit personally from participation in a standard setting process. Many standard setting processes involve evaluation of commercial technologies. The representative must disclose to his/her supervisor any time it becomes clear that any technical evaluation may involve a technology or a firm in which the representative or his immediate family has an interest or may benefit from.

3.7.3 Confidentiality of Information

As part of the responsibilities of participation in a standard setting process, a DHS employee may be asked to sign a non-disclosure agreement, the purpose of which is to bind the employee not to disclose confidential information owned or controlled by others and received by the participant during the standard setting process. That request is logical; however, the DHS employee should not sign any non-disclosure agreement without consulting DHS S&T General Counsel because signing such non-disclosure agreements may result in personal liability of the employee.

Disclosure of confidential or trade secret information by Federal employees is a criminal act and may result in adverse action against the employee. For example, see the Trade Secrets Act, 18 U.S.C. § 1905.¹³

3.7.4 Endorsement

Staff designated to represent DHS in a standard setting process must avoid any conduct, including making any commitment, that could be perceived as an endorsement of the product, process, or service, which is the subject of the standard setting process.

Endorsement by a Federal agency can contribute to the credibility or marketability of a product, process, or service. The use of the DHS seal associated with the standard or in combination with logos of private organizations are two instances in which an observer could reasonably deduce that DHS has endorsed the product, process, or service associated with that use. DHS, therefore, prohibits the use of the DHS seal without written authorization.

DHS representatives in standard setting processes should never agree to any use of the DHS name that is not factual as to its representative's participation or the identity of that representative without consulting with DHS S&T General Counsel. Also, DHS representatives should seek counsel if the standard setting body suggests any use of the DHS seal.

¹³ Full text available at <http://uscode.house.gov/download/pls/18C93.txt>.

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3.7.5 Actions in Response to Standards Development Determined Detrimental To DHS

As noted in section 3.7.4, DHS' participation in a standard setting process is premised on certain principles, such as process's being open and merit driven, i.e., an absence of favoritism and that it not be directed to one party's advantage. If the DHS representative in a specific standard setting process determines that the evolving standard will detrimentally affect DHS or the principles of its participation, the representative should work reasonably within the process to attempt to address the concerns. If that effort is unsatisfactory, the representative should promptly consult the agency's representative to the DHS Standards Council, the Director of the Test and Evaluation and Standards Division of the Science and Technology Directorate, or the Department's Standards Executive and S&T Counsel.

If, as a result of that consultation, the Department determines that the representative's concerns are well founded, the DHS representative should withdraw from the process by letter to the NGSB, also stating the Department's objections. The letter should also state that DHS does not endorse the standard setting process, or the ultimately adopted standard; consequently it will not be adopted (see section 4). Also, the letter should direct that the NGSB should not associate DHS with the approved standard.

3.7.6 Standards and Acquisition

In an acquisition, applicable standards may be prescribed by the solicitation. If sufficiently important, compliance with specific standards may be made a qualification criterion. Many public or private standards have been developed and adopted to minimize risks and maximize safety. In addition, the specifying of a standard has the advantage of promoting consistency and wide application. This will usually assure compatibility of the product or service with similar products or services of other DHS organizations or other governmental or private organizations.

3.7.7 Ethics Considerations

Participation in standards developing activities almost certainly involves working with representatives of the private sector, which imposes numerous responsibilities, ethical obligations, and possible antitrust considerations. Federal employees are subject to constraints on conduct that may not apply to private sector counterparts. These constraints include limitations and restrictions on acceptance of gifts, meals, travel expenses, etc.

Some cautionary tips to remember include:

- Avoid situations that are or may appear to be breaking antitrust laws;
- Do not accept donations by outside parties of expenses associated with your duties unless expressly authorized by a DHS Ethics Official;
- Prevent excessive travel, room, and per diem expenses;
- Avoid the appearance of using public office for private gain;
- Do not give, and avoid the appearance of giving, preferential treatment to any organization or person;
- Do not make, and avoid the appearance of making, a government decision outside official channels; and

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- Contact DHS S&T General Counsel or a DHS Designated Ethics Official for further advice should any questions or concerns about ethics issues arise.

Many groups have a social dimension that helps pull the group together. Issues are more easily resolved at the dinner table than at the conference table. Be aware that hosted events may raise ethics issues. Participants should associate with members before, during, and after the meetings; keep in touch; take advantage of opportunities; and have a good time, but be careful not to violate ethics rules. If possible within the ethics rules, participants should assist the group or a fellow member.

Participants who have a cooperative spirit in making the work time productive gain credibility. They should speak up whenever they have a positive contribution; otherwise, they should pay attention, listen carefully, and take good notes.

Representatives should be mentally prepared to deal with adversarial people who may attack with persistent questions, unfounded accusations, or misinformation. In such instances, participants should avoid getting into protracted discussion and should never put down or threaten the source of hostility. Instead, they should offer to continue the discussion later and make an effort to understand the source of hostility.

If questioned beyond normal curiosity to the extent that a representative believes he/she is being targeted as an intelligence source, or a source of information for procurement planning or gaining knowledge of a proprietary nature, i.e., industrial spying, the representative should back away from the conversation as quickly and as graciously as possible and report the incident to the appropriate DHS official.



ADOPTING AN NGS AS A DHS NATIONAL STANDARD

4

ADOPTING AN NGS AS A DHS NATIONAL STANDARD

The DHS policy and guidance governing the adoption of standards, including NGSs, are contained in DHS Management Directives.

4.1 What Is Adoption?

Adoption is the process by which DHS expresses formal acceptance of an NGS for use in direct procurement, as a reference in another document, or as guidance in the design, manufacturing, testing, or support of products. NGSs that are adopted by DHS following the management directives become DHS National Standards.

4

4.2 What Is a DHS National Standard?

A DHS National Standard is a standard that has been formally approved and adopted by DHS. The DHS Test & Evaluation and Standards Division will manage DHS National Standards.¹⁴

4.3 What is DHS' Position on Adoption and DHS National Standards?

DHS will seek the adoption of NGSs over government unique standards whenever possible and appropriate. **DHS National Standards are not mandatory.** However, their use by DHS components and customers, product manufacturers, and process developers is very much encouraged.

Federally mandated standards such as Federal Geospatial Data Committee Standards¹⁵ and Federal Information Processing Standards¹⁶ are considered adopted by the Department. Moreover, standards that have been referenced in OMB Circulars or in Executive Orders will also be considered adopted.

Company or de facto “standards” will not be adopted by DHS. These “standards” are usually developed by a single company in order to strategically position itself within a market. Since they are not developed by consensus with due process procedures, they will not be formally adopted by DHS. Consortia standards which are developed by companies or organizations that share similar strategic economic goals may be adopted by the Department after careful consideration and special approval.

4.4 Advantages of Adoption and Use of a DHS National Standard

Adopting an NGS document as a DHS National Standard offers the following advantages:

- Adoption provides visibility. This visibility is of great value to DHS components, customers, and homeland security professionals and practitioners. Visibility can help expedite the search for standards to support procurement, acquisition and operations.

¹⁴ A list of DHS adopted standards may be found at http://www.dhs.gov/xfrstresp/standards/editorial_0420.shtm.

¹⁵ Additional information is available at <http://www.fgdc.gov/standards>.

¹⁶ Additional information is available at <http://www.itl.nist.gov/fipspubs/index.htm>.

ADOPTING AN NGS AS A DHS NATIONAL STANDARD

- Adoption establishes confidence in the standard within the homeland security community.
- Adoption indicates acceptance and suitability of the standard for use in major DHS programs and initiatives.
- Adoption signals ownership and identifies DHS as a contributor, supporter, and point of contact if there are questions or problems with the standard.
- Adoption is the Law. The NTTAA directs Federal Agencies to achieve greater reliance on NGSs and decreased dependence on in-house standards. Adoption becomes a formal recognition of the Department's reliance on NGSs.
- DHS National Standards can assist Federal, State, local and tribal governments to build capability through purchases of qualified homeland security equipment.
- DHS National Standards provide accountability to government and management by identifying minimum performance and describing best practices.
- DHS National Standards ensure interoperability, interchangeability, durability, flexibility, portability, dependability, survivability, sustainability, scalability, and maintainability of homeland security products and services.

4.5 Adoption Criteria

Before recommending an NGS for adoption as a DHS National Standard, the following issues should be considered:

► Does the NGS meet DHS requirements?

If yes, then the NGS is a likely candidate for adoption. It is important to remember that an adopted NGS is not mandatory; it is simply available for use by DHS. In rare instances, the NGS may not fully meet DHS requirements. In those cases it may be necessary to develop additional document(s) that reference the NGS to address the overall requirements. Even though the NGS does not fully meet DHS requirements, it should still be adopted if it will be referenced. Not all interested DHS components have to agree on an NGS for it to be adopted.

► Are copies of the document readily available?

In general, availability is not an overwhelming issue with NGSs. However, there are some consortia standards developers that limit document access to members, which would make general access to DHS and other potential users difficult.

► Has the NGS been approved by the NGSB?

Draft NGSs should not be adopted since requirements can change as a result of comments during coordination.

► Does the NGS contain proprietary information that will require DHS or its contractors to pay royalty fees?

If royalty fees are required, DHS must assess whether they are fair and reasonable before adopting the NGS.



5 REPLACING DHS DOCUMENTS WITH NGS

The NTTAA directs that, where they meet the user's requirements, existing federal standardization documents be replaced with NGS documents. There may be occasions when an existing government specification or standard should be converted to an NGS. A simple test for determining whether a document is a candidate to be converted to an NGS is whether the private sector will use the standard. If the answer is yes, then the government standard is a potential candidate for conversion. If the answer is no, then DHS has other alternatives including DHS development of performance specifications and use of commercial item descriptions. However, actions such as this should be rare.

Efforts to develop NGSs for a non-commercial products or services or NGSs which describe a process or practice that will not be used industry-wide or nation-wide are discouraged. DHS should not participate in such efforts, nor should DHS adopt the resulting NGS. If an industry develops an NGS for a canceled government document, DHS must ensure it has a valid internal need for the NGS before adopting it.

5.1 Deactivation or Cancellation

If a satisfactory NGS exists, DHS should cancel or deactivate the government document for new design products. The adoption notice for the NGS and the notice of the cancelled government document or deactivated new design must provide all applicable superseding documents, substitutability, or cross-reference information.

5.2 Qualification and NGS Adoption

Sometimes DHS will adopt an NGS that has an associated qualified products list or qualified manufacturers list. The following scenarios may provide guidance in some situations:

- When an NGS meets both DHS and commercial industry needs and when an industry-wide qualification activity can adequately ensure compliance with the NGS qualification requirements, DHS may adopt and use both the NGS and its associated qualification list.
- When an NGS includes qualification requirements and no industry qualification activity exists, but DHS has a qualification activity available that can ensure compliance, DHS should adopt the NGS and use its own qualification activity to support acquisition.
- DHS should be cautious in adopting an NGS when it includes a qualification requirement that identifies a governmental activity as the sole designated qualification activity for commercial and government contracts. When an NGS identifies a DHS qualification activity, the identification must say the qualifying activity is only for DHS procurement.
- When an NGS includes qualification requirements and both an industry-wide and a DHS qualification activity exist, DHS should adopt the NGS and plan for a transition to the industry qualification.
- When an NGS does not include qualification requirements but DHS has a justified need for qualification, DHS may issue a government document citing the NGS and establishing requirements.

SUMMARY

From the overarching Federal policy through DHS policy, NGSs and NGSBs fulfill a vital role in promoting trade and developing confidence in technology and accountability in management systems. DHS is committed to the effective use of NGSs in its programs and national-level homeland security initiatives. Operational components and major programs are strongly encouraged to use NGSs and participate in NGSBs. The DHS Test & Evaluation and Standards Division can assist in finding the right NGS or NGSB to meet your needs.

APPENDIX: LIST OF NGSBs

The following is a list of NGSBs that have a scope of work and interest that may intersect with homeland security needs. This list is not meant to be a complete compilation of the hundreds of domestic and international NGSBs. Moreover, DHS may have standards needs in areas in which none of the listed organizations function. For a list of those NGSBs accredited by ANSI, go to www.ansi.org. The Standards Engineering Society (SES) also maintains a list of NGSBs that includes consortia standards developers and other standards organizations not accredited by ANSI but widely used. This list can be viewed by clicking on “Links” on the SES website at www.ses-standards.org.

3rd Generation Partnership Project (for wireless communication)

3rd Generation Partnership Project 2

Acoustical Society of America (ASC)

Aerospace Industries Association (AIA)

Air Conditioning and Refrigeration Institute (ARI)

Air Movement and Control Association (AMCA)

Alliance for Telecommunications Industry Solutions (ATIS)

Aluminum Association (AA)

American Architectural Manufacturers Association (AAMA)

American Association of State Highway and Transportation Officials (AASHTO)

American Bureau of Shipping (ABS)

American Chemistry Council (ACC)

American Concrete Institute (ACI)

American Conference of Governmental Industrial Hygienists (ACGIH)

American Gas Association (AGA)

American Industrial Hygiene Association (AIHA)

American Institute of Aeronautics and Astronautics (AIAA)

American Institute of Steel Construction (AISC)

American Institute of Timber Construction (AITC)

American National Standards Institute (ANSI)

American Nuclear Society (ANS)

American Petroleum Institute (API)

American Public Transportation Association (APTA)

American Railway Engineering and Maintenance of Way Association (AREMA)

American Society for Nondestructive Testing (ASNT)

American Society for Quality (ASQ)

APPENDIX: LIST OF NGSBs

American Society of Civil Engineers (ASCE)
American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
American Society of Mechanical Engineers International (ASME)
American Society of Naval Engineers (ASNE)
American Society of Safety Engineers (ASSE)
American Society of Sanitary Engineering (ASSE)
American Towing Tank Conference (ATTC)
American Type Culture Collection (ATCC)
American Water Works Association (AWWA)
ASIS International (ASIS)
Association for Automatic Identification and Mobility (AIM) (AIM Global)
Association for the Advancement of Medical Instrumentation (AAMI)
Association of Public-Safety Communications (APCO)
ASTM International
Building Officials and Code Administrators (BOCA International) (incorporated into the International Code Council)
Building Owners and Managers Association (BOMA)
Canadian General Standards Board (CGSB)
Central Station Alarm Association (CSAA)
Chlorine Institute (CI)
Clinical and Laboratory Standards Institute (CLSI)
Compressed Gas Association (CGA)
Construction Specifications Institute (CSI)
Data Interchange Standards Association, Inc. (DISA)
Electronic Commerce Code Management Association (ECCMA)
Electronic Components Assemblies and Materials Association (ECA)
Electronic Industries Alliance (EIA)
Electrostatic Discharge Association (ESDA)
Emergency Interoperability Consortium (EIC)
FM Global
Government Electronics & Information Technology Association (GEIA)
Health Physics Society (HPS)

APPENDIX: LIST OF NGSBs

High Frequency Industry Association (HFIA)
Human Factors and Ergonomics Society, Inc. (HFES)
Illuminating Engineering Society of North America (IESNA)
Information Technology Industry Council (ITI)
Institute for Interconnecting and Packaging Electronic Circuits (IPC)
Institute of Clean Air Companies (ICAC)
Institute of Electrical and Electronics Engineers (IEEE)
Institute of Environmental Sciences and Technology (IEST)
Institute of Industrial Engineers (IEE)
Instrumentation Society of America (ISA)
Insulated Cable Engineers Association (ICEA)
International Association of Plumbing and Mechanical Officials (IAPMO)
International Code Council (ICC)
InterNational Committee for Information Technology Standards (INCITS)
International Electrotechnical Commission (IEC)
International Organization for Standardization (ISO)
International Radio Consultative Committee (CCIR)
International Safety Equipment Association (ISEA)
International Ship & Offshore Structures Congress (ISSC)
International Telecommunication Union (ITU)
Internet Engineering Task Force (IETF)
Joint Aeronautical Commander's Group (JACG)
Joint Electron Device Engineering Council (JEDEC) (now known as JEDEC Solid State Technology Association)
Manufacturers Standardization Society of the Valve and Fittings Industry (MSS)
Marine Technology Society (MTS)
NACE International (NACE)
National Aerospace Standards Committee (NA/NAS) (related to AIA)
National Association of Architectural Metal Manufacturers (NAAMM)
National Association of Relay Manufacturers (NARM)
National Cargo Bureau, Inc. (NCB)
National Conference of Standards Laboratories (NCSL)

APPENDIX: LIST OF NGSBs

National Council on Radiation Protection and Measurements (NCRP)
National Electrical Manufacturers Association (NEMA)
National Fire Protection Association (NFPA International)
National Fluid Power Association International (NFPA)
National Institute of Building Sciences (NIBS)
National Institute of Justice (NIJ) Special Technical Committee (STC)
National Marine Electronics Association (NMEA)
National Marine Manufacturers Association (NMMA)
National Sanitation Foundation (NSF)
North American Electric Reliability Council (NERC)
NSF International (NSF)
Open Geospatial Consortium (OGC)
Optics and Electro-Optics Standards Council (OEOSC)
Organization for the Advancement of Structured Information Standards (OASIS)
Radio Technical Commission for Maritime Services (RTCM)
SAE International (SAE)
Scientific Apparatus Makers Association (SAMA)
Security Industry Association (SIA)
Simulation Interoperability Standards Organization (SISO)
Society of Allied Weight Engineers (SAWE)
Society of Automotive Engineers (SAE)
Society of Naval Architects and Marine Engineers (SNAME)
Standards Engineering Society (SES)
Telecommunication Industry Association (TIA)
The Instrumentation, Systems, and Automation Society (ISA)
The Open Group
U.S. Department of Commerce, Voluntary Products Standards Program
UN Centre for Facilitation of Procedures and Practices for Administration, Commerce and Transport (now called UN Centre for Trade Facilitation and Electronic Business) (UN/CEFACT)
Underwriters Laboratories (UL)
World Customs Organization (WCO)
World Wide Web Consortium (W3C)



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