



UASSC Organizational Matters

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American National Standards Institute (ANSI)



- Founded in 1918, [ANSI](#) is a private non-profit membership organization whose mission is to enhance U.S. global competitiveness and the American quality of life by promoting, facilitating, and safeguarding the integrity of the U.S. voluntary standardization system
- ANSI members include businesses, professional societies and trade associations, standards developing organizations (SDOs), government agencies, and consumer and labor organizations
- Official U.S. representative to the International Organization for Standardization (ISO) and, via the U.S. National Committee, the International Electrotechnical Commission (IEC)



Purposes of the Institute

(selected excerpts from ANSI Constitution and By-Laws)




- To serve as the national coordinating institution for voluntary standards, conformity assessment and related activities in the United States of America . . .
- To provide the means for determining the need for new standards and conformity assessment programs; to promote activity by existing organizations competent to resolve the need; and to work toward establishment of suitable groups for these purposes where such do not already exist
- To cooperate with departments and agencies of federal, state and local governments in achieving (i) optimum compatibility between government laws and regulations and the voluntary standards of industry and commerce . . .



- Represents U.S. globally
- Accredits standards developing organizations (SDOs) and approves American National Standards
- Accredits & approves technical advisory groups (mirror committees) for ISO / IEC technical work
- Accredits conformity assessment bodies
- Provides education and training services
- Offers neutral forum for coordination & identification of standards needs and priorities (ANSI Standardization Collaborative)
- Serves as a bridge between U.S. public & private sectors
- Ensures integrity of the standards and conformity assessment system
- ANSI doesn't develop standards

Examples of ANSI-accredited SDOs

ASTM
International




ASTM
INTERNATIONAL
Standards Worldwide

SAE International



SAE
INTERNATIONAL

Institute of
Electrical and
Electronics Engineers




IEEE STANDARDS
ASSOCIATION

Consumer
Technology
Association



CES

Underwriters
Laboratories Inc.



Underwriters
Laboratories Inc.®

Underwriters Laboratories Inc.

National Fire
Protection
Association



NFPA

American
Society of
Mechanical
Engineers



ASME
SETTING THE STANDARD

American
Institute of
Aeronautics
And Astronautics



AIAA
Shaping the Future of Aerospace

Alliance for
Telecommunications
Industry Solutions



atis

American Society
of Agricultural
and Biological
Engineers



ASABE

American
Petroleum
Institute



energy API

And more than 200
additional organizations

ANSI Standardization Collaborative



- An **ANSI Standardization Collaborative** is a mechanism to advance cross-sector coordination in the development and compatibility of standards and conformance programs needed to support emerging technologies and national/global priorities
 - Coordinate efforts of both the private- and public-sectors
 - Identify existing standards and standards in development
 - Define where gaps exist based on stakeholder needs
 - Recommend additional work needed, timeline for its completion, and organizations that can perform the work
- Helps to inform resource allocation for standards participation, avoid duplication of effort, drive coordinated standards activity

ANSI Standardization Collaboratives

1994

2003

2004

2005

2006

2007

2007

2009

Information Infrastructure Standards Panel

Homeland Defense and Security Standardization Collaborative

Nanotechnology Standards Panel

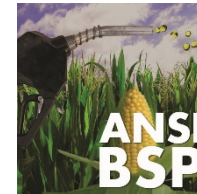
Healthcare Information Technology Standards Panel

ID Theft Prevention and ID Management Standards Panel

Biofuels Standards Coordination Panel

ANSI Network on Chemical Regulation

Workshop Toward Product Standards for Sustainability



2009

2010

2011

2012

2013

2016

2017

ANSI-NIST Nuclear Energy Standards Coordination Collaborative

The Financial Management of Cyber Risk

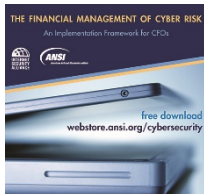
ANSI Electric Vehicles Standards Panel

ANSI Energy Efficiency Standards Coordination Collaborative

ANSI Network: Smart and Sustainable Cities

America Makes & ANSI Additive Manufacturing Standardization Collaborative

Unmanned Aircraft Systems Standardization Collaborative



Examples of ANSI Collaboratives

(f/k/a Standards Panels)

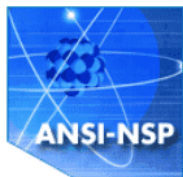


ANSI Homeland Defense and Security Standardization Collaborative

(Formerly *Homeland Security Standards Panel*)

www.ansi.org/hdssc

Works to identify existing consensus standards, or, if none exist, assist government agencies and those sectors requesting assistance to accelerate development and adoption of consensus standards critical to homeland security and homeland defense. Seeks broad engagement with the Department of Homeland Security (DHS), Department of Defense (DOD), National Institute for Occupational Safety and Health (NIOSH), state agencies, and other relevant entities.



Nanotechnology Standards Panel

www.ansi.org/nsp

Established at the request of the Office of Science and Technology Policy, Executive Office of the President, to facilitate the development of standards supporting nomenclature/terminology; materials properties; testing, measurement and characterization procedures; and health, safety and environmental issues. Efforts are primarily focused on the coordination of U.S. interests in the international standardization arena, particularly within IEC TC 113 and ISO TC 229.

Examples of ANSI Collaboratives (contd.)



Healthcare Information Technology Standards Panel

www.hitsp.org

Served as a national, volunteer-driven, consensus-based organization working to ensure interoperability of electronic health records in the U.S. Operated under contract to U.S. Department of Health and Human Services (HHS), HITSP completed Interoperability Specifications in priority areas including electronic health record laboratory results reporting, biosurveillance, consumer empowerment, and quality.



Electric Vehicles Standards Panel

www.ansi.org/evsp

Developed a standardization roadmap and standards compendium intended to enable the safe, mass deployment of electric vehicles and associated infrastructure in the United States.



Energy Efficiency Standardization Coordination Collaborative

www.ansi.org/eesc

Works to coordinate a U.S. approach to energy efficiency standardization activities in five target areas. Developed a standardization roadmap and standards compendium to help advance energy efficiency in the United States, particularly with regard to the built environment.

Developing the Standardization Roadmap



- Determine how the roadmap will be organized
 - Main topics and subtopics
- Set up a working group (WG) structure that maps to that structure
- Outreach / call for participants
 - People can participate in as many WGs as they wish
- Identify WG co-chairs to facilitate discussions
- Set date/time for first WG “virtual” online meetings
 - Determine regular schedule of meetings, typically bi-weekly

Developing the Standardization Roadmap (contd.)



- Describe the relevant issue(s)
 - Volunteers needed to draft the text for WG review
- Identify published or in-development standards
- State any standards gap(s)
 - A “gap” means no published standard or specification exists that covers the particular issue in question
- Make a recommendation(s) how to fill the gap(s)
- Determine if additional R&D is needed
- Establish the priority for action (high, medium, or low)
- Identify an organization(s) that potentially can address the gap both for R&D and developing the standard

Making the CASE for the Priority Level



Criteria

- **Criticality (Safety/Quality Implications)**
- How important is the project? How urgently is a standard or guidance needed? What would be the consequences if the project were not completed or undertaken? A high score means the project is more critical.
- **Achievability (Time to Complete)** -
Does it make sense to do this project now, especially when considered in relation to other projects? Is the project already underway or is it a new project? A high score means there's a good probability of completing the project soon.

Scoring Values

- 3 - critical; 2 - somewhat critical; 1 - not critical
- 3 - project near completion; 2 - project underway; 1 - new project

Prioritization Matrix (contd.)



Criteria

- **Scope (Investment of Resources)** - Will the project require a significant investment of time/work/money? Can it be completed with the information/tools/resources currently available? Is pre-standardization research required? A high score means the project can be completed without a significant additional investment of resources.
- **Effect (Return on Investment)** - What impact will the completed project have on the AM industry? A high score means there are significant gains for the industry by completing the project.

Scoring Values

- 3 - low resource requirement;
2 - medium resource requirement;
1 - resource intensive
- 3 - high return; 2 - medium return; 1 - low return
- Score rankings: Low Priority (a score of 4-6); Medium Priority (a score of 7-9); High Priority (a score of 10-12)



Co-Chairs' Role



- Promotion
 - Speak about Collaborative activities at industry events
 - Respond to media inquiries in consultation with staff and ANSI's communications team as appropriate
- Plan, schedule and preside over meetings of the Collaborative and Steering Committee
- Provide strategic direction to staff as needed
- Help identify potential Steering Committee members and working group co-chairs as needed

Steering Committee



Role

- Provide overall planning and strategic direction
- Identify / recruit participants
- Hear periodic progress reports
- Ensure work stays on schedule

Sample Composition

- Co-Chairs (Private- and Public-Sector) and Staff
- Working Group Co-chairs
- Small number of at-large members representing a balance of stakeholder interests

Ingredients for Success



- Demonstrated need for coordination
- Broad stakeholder support
- Clearly defined objectives, timelines, and deliverables
- Committed leadership and participants
- Stable funding mechanism

Recent Example



- America Makes & ANSI Additive Manufacturing Standardization Collaborative (AMSC) launched in March 2016
- National Institute of Standards and Technology (NIST), U.S. Department of Defense (DoD), Federal Aviation Administration (FAA), several SDOs were instrumental in the formation of the AMSC
- Before AMSC there was no process for identifying priorities and interdependencies in the development of standards and specifications for additive manufacturing (“AM” a/k/a 3D Printing)
- A number of SDOs are engaged in standards-setting for various aspects of AM, prompting the need for coordination to maintain a consistent, harmonized, and non-contradictory set of AM standards and specifications



AMSC Deliverables



- AMSC Standardization Roadmap for Additive Manufacturing, Version 1.0 (February 2017)
 - Identifies existing standards and specifications, as well as those in development, assesses gaps, and makes recommendations for priority areas where there is a perceived need for additional standardization
- AMSC Standards Landscape
 - A list of standards that are directly or peripherally related to the issues described in the roadmap
- Both available as free downloads on www.ansi.org/amsc



for more information

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