



Homeland Security

Science and Technology

U.S. Department of Homeland Security
Washington, D.C. 20528

**Attachment 1:
Department of Homeland Security (DHS) Fiscal Year 2022 NTTAA Report**

DHS's FY2022 NTTAA Agency Annual Report Component Responses

Department of Homeland Security (DHS) Fiscal Year 2022 Agency Report

1. *Please provide a summary of your agency's activities undertaken to carry out the provisions of OMB Circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities" and the National Technology Transfer and Advance Act (NTTAA). The summary should contain a link to the agency's standards-specific website(s) where information about your agency's standards and conformity assessment related activities are available.*

The Department of Homeland Security (DHS) standards policy was established as part of the Homeland Security Act of 2002, incorporating the National Technology Transfer and Advancement Act of 1995 and the Office of Management and Budget Circular A-119. Implementation of the Circular was delegated to the Under Secretary for Science and Technology by the Secretary of Homeland Security.

A summary of DHS Components that were active in FY2021 in carrying out the provisions of OMB Circular A-119 include the Countering Weapons of Mass Destruction Office (CWMD), Federal Emergency Management Agency (FEMA), the U.S. Coast Guard (USCG), as well as the Science & Technology Directorate (S&T), which executes the duties of the Department's Standards Executive. For more information about DHS, see www.dhs.gov.

Component-level responses are summarized below:

- **USSS**
USSS uses several Voluntary Consensus Standards (ISO, ASTM, MIL SPEC, IBC Building Codes, etc.) to conduct the development, testing and procurement of equipment and technology and facilities. Furthermore, USSS does not have any USSS-specific standards.

USSS does not maintain a standards-specific website.
- **USCIS**
USCIS has developed and is implementing data standards in its technology systems, which are used to perform the mission. USCIS participates in the DHS Immigration Data Integration Initiative (IDII) to help promote consistent data standards across the department. USCIS standards are maintained locally and made available via Reference Data as a Service and a DHS-hosted instance of Collibra.
<https://ecm.uscis.dhs.gov/team/opq/OCDO/DSP/SitePages/default.aspx#standards>
- **CBP**
CBP utilizes consensus standards from the following groups:
 - AATCC - American Association of Textile Chemists and Colorists
 - ABC - American Board of Criminalistics
 - AIC - Arizona Identification Council (AIC)
 - ANAB - ANSI National Accreditation Board
 - ANSI - American National Standards Institute

- API - American Petroleum Institute
- API - American Petroleum Institute
- ASB - Auditing Standards Board (under American Institute of Certified Public Accountants)
- ASCP - American Society for Clinical Pathology)
- ASME - American Society of Mechanical Engineers
- ASTM - American Society of Testing and Materials
- ASTM- ASTM International (formerly American Society for Testing and Materials)
- CFTT - National Institute of Standards (NIST) Computer Forensics Tool Testing Program
- IACIS - International Association of Computer Forensic Examiners
- IAI - International Association for Identification
- ICUMSA - International Commission for Uniform Methods of Sugar Analysis
- IEEE - Institute of Electrical and Electronics Engineers Standards Association
- NAFTAZ - National Association of Free Trade Zones
- NFPA - National Fire Protection Association
- OSAC - Organization of Scientific Area Committees For Forensic Science
- SAE - Society of Automotive Engineers
- SAFS - Southern Association of Forensic Scientists
- SANS - SANS Institute Best Practices (SysAdmin, Audit, Network and Security)
- SWAFS - Southwestern Association of Forensic Scientists
- SWGDE - Scientific Working Group on Digital Evidence
- TIC Council - Testing, Inspection, and Certification Council (formerly IFIA – International Federation of Inspection Agencies)

Government Standards:

- CISA – Cybersecurity and Infrastructure Security Agency
- EPA – Environmental Protection Agency

CBP is directly involved in the development of consensus standards for the following:

ASTM – American Society of Testing and Materials

- D02 Committee – Petroleum Products, Liquid Fuels, and Lubricants
- E30 Committee - Forensics

API – American Petroleum Institute

- COPM – Committee on Petroleum Measurement Standards Meeting

OSAC

- IAI representative to Forensic Science Standards Board; Affiliate, Footwear and Tire Subcommittee

AIC

- Member, Board of Directors

ASB

- Executive Secretary, Footwear and Tire Consensus Body

CBP uses our own agency-specific standards under the CBP Lab Methods (CBPL Method)

that often “incorporate by reference” consensus standards from ASTM, ANSI, and other groups.

<https://www.cbp.gov/about/labs-scientific-svcs/technical-documents/lab-methods>

- **CWMD**

In 2022, CWMD continued activities in accordance with OMB Circular A-119 which directs that “agencies must consult with voluntary consensus standards bodies in the development of standards when consultation and participation is in the public interest and is compatible with their missions, authorities, priorities, and budgetary resources.” To this end, CWMD continued to sponsor and participate in the development and maintenance of Institute of Electrical and Electronics Engineers (IEEE), American National Standards Institute (ANSI) and ASTM voluntary consensus standards for radiation and nuclear, and biological threat detection systems used in homeland security. In 2022 CWMD sponsored the publication of a revision to ANSI N42.41 American National Standard Performance Criteria for Active Interrogation Systems Used for Homeland Security and IEEE Standard N42.43 for Mobile Radiation Monitors Used for Homeland Security and of an amendment to ANSI N42.32a American National Standard Performance Criteria for Alarming Personal Radiation Detectors for Homeland Security. CWMD also participated with the U.S. Committee for International Electrotechnical Commission (IEC) international standards for radiation detection systems. In 2022 the IEC published IEC 61452: Standard for Calibration and Measurements using High Purity Germanium (HPGe) Detectors.

CWMD continued to sponsor IEEE Series N42 standards for radiation detection for homeland security that are available at:

<https://ieeexplore.ieee.org/browse/standards/get-program/page>

- **CISA**

The **Cybersecurity and Infrastructure Security Agency (CISA)** partners with standards organizations, consistent with CISA authorities, strategic intent, and DHS International Cybersecurity priorities, to drive policies and create standards to improve interoperability and automate cybersecurity operations, among other outcomes. CISA works with domestic and international partners and engages in standards development at the national and international levels. CISA participates in the following standards bodies: 3rd Generation Partnerships Project (3GPP), Institute of Electrical and Electronic Engineers (IEEE), International Telecommunication Union (ITU), Global Systems for Mobile Communication Alliance (GSMA), Internet Engineering Task Force (IETF), Alliance for Telecommunications Industry Standards (ATIS), Wi-Fi Alliance, O-RAN Alliance, Wireless Broadband Alliance, and OASIS Open. Within those bodies, CISA

participates to monitor, support, and influence standards development activities relevant to agency mission objectives.

Department/Agency: CISA			
Engagement			
Standards Body	Subcommittees/working groups, etc.	What technology /technologies does the subcommittee/group set standards for?	Other relevant activities or information
3rd Generation Partnership Project (3GPP)	3GPP	Cellular telecommunications technologies, including radio access, core network and service capabilities, and system description for mobile telecommunications.	CISA ECD participates to influence standards work in support of mission objectives for NS/EP Priority Services for Voice, Video, and Data in 3GPP Systems (e.g., 4G and 5G mobile systems). Also, to ensure NS/EP Priority Services coexistence with other priority services (e.g., Emergency and Mission Critical Services for Group Type Communications).
	3GPP SA1	Services	CISA ECD participates to influence stage 1 (service description) specifications for Multimedia Priority Service (MPS) and to ensure MPS support in evolving 3GPP systems (e.g., 5G) and emerging service features.
	3GPP SA2	Architecture	CISA ECD participates to influence stage 2 (architecture requirements) specifications in support of priority features for MPS.
	3GPP SA3	Security	CISA ECD participates to support 4G and 5G security solutions benefiting MPS.
	3GPP SA5	Management, orchestration, and charging	CISA ECD actively monitors work for MPS interests.
	3GPP SA6	Mission critical applications	CISA ECD actively monitors work to ensure MPS coexistence with MCS.
	3GPP CT1	User Equipment - Core Network Protocols	CISA ECD participates to influence protocol specifications

			in support of priority features for MPS.
	3GPP CT3	Interworking with External Networks	CISA ECD participates to <u>influence</u> CT3 (e.g., policy, interconnection) specifications in support of priority features for MPS.
	3GPP CT4	Core Network Protocols	CISA ECD participates to <u>influence</u> CT4 (e.g., HTTP-based APIs) specifications in support of priority features for MPS.
	3GPP RAN1	Radio Layer 1	CISA ECD participates to <u>influence</u> RAN1 work in support of priority features for MPS.
	3GPP RAN2	Radio Layer 3 and Radio Layer 3	CISA ECD participates to <u>influence</u> RAN2 work in support of priority features for MPS.
	3GPP RAN3	UTRAN/E-UTRAN architecture and protocols for the Iu, Iur, Iub, S1 and X2 interfaces	CISA ECD participates to <u>influence</u> RAN3 work in support of priority features for MPS.
	3GPP RAN4	Performance and protocol aspects	CISA ECD <u>passively monitors</u> work for MPS interests.
Institute of Electrical and Electronic Engineers (IEEE)	IEEE 802 LAN/MAN Standards Committee (LMSC)	Local, metropolitan, and other area networks standards	CISA ECD participates to <u>influence</u> work to support NS/EP Priority Services in WLAN access networks (a.k.a WiFi networks).
	IEEE 802.11 WG	Wireless Local Area Network (WLAN) Standards	CISA ECD participates to <u>influence</u> work to define a NSEP Priority Access feature for ethernet PHY/MAC protocol.
	IEEE 802.11be (TGbe)	Task group for WLAN enhancement	CISA ECD participates to <u>influence</u> work to define a NSEP Priority Access feature for ethernet PHY/MAC protocol.
	IEEE 802.11TGm	Task Group for revising and updating the IEEE 802.11 Standards	CISA ECD participates to <u>influence</u> work to define a NSEP Priority Access feature for supporting previous generation of WLAN PHY/MAC protocols.
	IEEE 802.11 UHR (Ultra High Reliability)	Study Group for next generation IEEE 802.11 Amendment	CISA ECD participates to <u>influence</u> work to define a NSEP Priority Access feature for next generation WLAN PHY/MAC protocol.

International Telecommunication Union (ITU)	ITU Telecommunication Sector (ITU-T)	Telecommunications Standards	CISA ECD monitors ITU-T activities for relevance to mission objectives related to NS/EP Priority Services support in global standards.
	ITU-T Study Group 11	Signaling requirements, protocols, test specifications and combating counterfeit products	CISA ECD actively monitors SG11 activities (signaling and protocol) for work on Emergency Telecommunications Service (ETS) (ITU-T term for NS/EP Priority Services).
	ITU-T Study Group 13	Future networks, with focus on IMT-2020, cloud computing and trusted network infrastructures.	CISA ECD passively monitors SG13 activities for work on ETS.
	ITU-T Study Group 17	Telecommunications and ICT Security	CISA ECD passively monitors SG17 activities for global standards on public network security benefiting NS/EP Priority Services security.
	ITU-T FG-AI4NDM	ITU-T Focus Group on AI for Natural Disaster Management	CISA ECD participates to passively monitor work for relevance to ECD mission objectives.
	US State Dept Coordination	US State Dept interagency coordination for ITU	CISA ECD participates in the US State Department interagency coordination process in support of ECD mission objectives.
	Global Systems for Mobile Communication Alliance (GSMA)		Mobile network roaming and interoperability
GSMA Networks Group		Specifications for 5G Roaming and Interoperability	CISA ECD participates to influence work defining an MPS attribute in the GSMA Generic Slice Template specification.
Internet Engineering Task Force (IETF)		Internet Protocol (IP) Standards	CISA ECD participates to influence work relevant support of NS/EP Priority Services over IP transport networks.
	Secure Telephone Identity Revisited (stir)	Secure Telephone Identity (STI) Protocols	CISA ECD participates to influence work relevant to mission objectives for NS/EP Priority Services over IP transport networks.

	Automated Certificate Management Environment (acme)	ACME protocols and API	CISA ECD <u>actively monitors</u> work relevant to mission objectives for NS/EP Priority Services over IP transport networks.
	Transport Area Working Group (tsvwg)	IP transport and routing protocols	CISA ECD <u>influence</u> work relevant to mission objectives for NS/EP Priority Services over IP transport networks.
	Adaptive DNS Discovery (add)	DNS protocols	CISA ECD <u>actively monitors</u> work relevant to mission objectives for NS/EP Priority Services over IP transport networks.
	Traffic Engineering (TE) Architecture and Signaling (teas)	Network Slicing	CISA ECD <u>actively monitors</u> work relevant to mission objectives for NS/EP Priority Services over IP transport networks.
	Transport Layer Security (tls)	Transport Security	CISA ECD <u>actively monitors</u> work relevant to mission objectives for NS/EP Priority Services security and Privacy
	Messaging Layer Security (mls)	Message security for Groups	CISA ECD <u>actively monitors</u> work relevant to mission objectives for NS/EP Priority Services security and Privacy
	Remote Attestation Procedures (rats)	Remote Attestation	CISA ECD <u>actively monitors</u> work relevant to mission objectives for NS/EP Priority Services security and Privacy
Alliance for Telecommunications Industry Standards (ATIS)		National Telecommunications Standards	CISA ECD participates to <u>influence</u> work to define national specific aspects for NS/EP Priority Services using global standards features (e.g., 3GPP, IETF).
	Packet Technologies and Systems Committee	Services, architectures, and signaling,	CISA ECD participates to <u>influence</u> work to define national standards for NS/EP Priority Services for Voice, Video, and Data.
	ATIS/SIP Forum IP-NNI Task Force	IP Network-to-Network Interconnections	CISA ECD participates to <u>influence</u> work to allow interconnection and interoperability of NS/EP Priority Services for Voice, Video, and Data.

	Wireless Technologies and Systems Committee	Wireless/mobile telecommunications networks in the U.S.	CISA ECD participates to influence work relevant to support of NS/EP Priority Services for Voice, Video, and Data.
	5G North American Needs Focus Group	Coordinate North American Needs in 3GPP	CISA ECD participates to influence need for NS/EP Priority Services.
	5G Supply Chain Working Group	Development of ATIS standards on supply chain	CISA ECD participates to passively monitor work relevant to ECD mission objectives for NS/EP Priority Services.
	Next G Alliance	Development of the National Roadmap for 6G and Beyond.	CISA ECD participates to passively monitor work relevant to ECD mission objectives for NS/EP Priority Services.
WiFi Alliance		Development of requirements and test programs for Wi-Fi interoperability	CISA ECD participates to influence work to define a NSEP Priority Access features for WLAN PHY/MAC protocol interoperability.
	Wi-Fi 7 Marketing Task Group (MTG)	Development of use cases, requirements and features for Wi-Fi interoperability	CISA ECD participates to influence work to define a NSEP Priority Access feature for WLAN PHY/MAC protocol interoperability.
	Wi-Fi 7 Technical Task Group (MTG)	Development of test-cases, Test and Validation for Wi-Fi interoperability	CISA ECD participates to influence work to define a NSEP Priority Access feature for WLAN PHY/MAC protocol interoperability.
	Wi-Fi Optimized Connectivity Experience (OCE) Task Group (Marketing and Technical)	Development of requirements, features and use cases for Wi-Fi QoS interoperability	CISA ECD participates to influence WLAN QoS work relevant to ECD mission objectives for NS/EP Priority Services.
O-RAN Alliance		Defining architecture and solution for intelligent, open, virtualized and fully interoperable Radio Access Networks	CISA ECD participates to actively monitor work relevant to mission objectives for NS/EP Priority Services

<p>Wireless Broadband Alliance</p>		<p>Standards and guidelines for NextGen Wi-Fi, OpenRoaming, 5G and IoT.</p>	<p>CISA ECD planned participation in 2023 to determine relevance to mission objectives for NS/EP Priority Services support in Wi-Fi access networks and OpenRoaming solution</p>
<p>OASIS Open</p>	<p>Automated Course of Action Operations (CACAO) for Cyber Security TC</p>	<p>Defining the standard for implementing course of action playbooks for cybersecurity operations.</p>	<p>CISA CSD participants to influence work relevant to CSD mission objectives.</p>
	<p>Common Security Advisory Framework (CSAF) TC</p>	<p>Standardizing automated disclosure of cybersecurity vulnerability issues</p>	<p>CISA CSD participants to influence work relevant to CSD mission objectives.</p>
	<p>Cyber Threat Intelligence (CTI) TC</p>	<p>Supporting automated information sharing for cybersecurity situational awareness, real-time network defense, and sophisticated threat analysis</p>	<p>CISA CSD participants to influence work relevant to CSD mission objectives as a co-chair of the Interoperability subcommittee.</p>

- FEMA**

FEMA provides subject-matter experts to participate on design standards committees and the update cycles of the I-Codes. These standards include: ICC 500, Standard for the Design and Construction of Storm Shelters; ICC 600, Standard for Residential Construction in High Wind Regions; ASCE 7, Minimum Design Loads and Associated Criteria for Buildings and Other Structures; ASCE/SEI/AMS Wind Speed Estimation Standard; ASCE 24, Flood Resistant Design and Construction; ASCE/SEI 41, Seismic Evaluation and Retrofit of Existing Buildings; ICC 605, Standard for Residential Construction in Regions with Seismic Hazard; ASTM E3075, Standard Test Method for Water Immersion and Drying for Evaluation of Flood Damage Resistance; ASTM Flood Damage Resistance Rating of Materials and Assemblies; ICC 1300, Standard for the Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings; and other applicable standards as needed. FEMA’s building code-related resources can be found on FEMA.gov at [Building Code Documents](https://www.fema.gov/building-code-documents):

<https://www.fema.gov/emergency-managers/risk-management/building-science/building-codes>

- **FLETC**

The Federal Law Enforcement Training Centers (FLETC) has reviewed OMB Circular A-119 and DHS Directive 078-04 and has determined that it is currently not involved in, nor actively participating with standards development organizations, to develop voluntary consensus standards. FLETC will continue to examine its programs to ensure compliance with DHS Directive 078-04.

- **ICE/OFTP/AOU**

The OFTP Ballistics Laboratory (BALLAB) conducts research and testing of ammunition, firearms, and other law enforcement equipment. The work conducted by the BALLAB includes communication with users to collect general requirements, ongoing market research and product testing, solicitation testing to assist Office of Acquisition Management (OAQ) in the acquisition process, and quality surveillance testing during the contract period of performance. The BALLAB uses standards created and administered by the Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) and International Organization for Standardization (ISO).

<https://saami.org/>

<https://www.iso.org/home.html>

- **MGMT/OCHCO**

MGMT/OCHCO did not have any activities under the use of voluntary consensus standards or the NTTAA during Fiscal Year 2022. MGMT/OCHCO works within the bounds of, and is guided by, the Mission Support Management Directorate Data Management Committee (MSMD DMC) to identify need, define/identify a standard, and track implementation.

[Systems Engineering and Standards](#)

[DHS Directive 078-04](#) Standards Policy Governance

[DHS Management Directive 10602](#) Homeland Security Standards Subject Area Working Groups

- **TSA**

TSA continues to support and fund the development of the Industry supported/sponsor data format standard "DICOS" (Digital Imaging and Communication in Security) through the governing body of NEMA (National Electrical Manufacturers Association). NEMA serves as both the facilitator for the development of the standard (with industry members participating in the development process) and publishing entity of the standard. This process and standard would be considered a "Voluntary Consensus" approach.

- **USCG**

The Coast Guard supports the provisions of OMB Circular A-119 and maintains one of the most robust standards programs in the Federal Government to meet our regulatory and research and development objectives. The Coast Guard remains committed to developing and adopting nationally and internationally recognized standards to improve maritime safety, security, and marine environmental protection, and to promote the competitiveness of U.S. businesses in the global marketplace. Incorporating voluntary

consensus standards helps the Coast Guard fulfill its regulatory functions more efficiently, develop the Government/industry partnerships crucial to stewardship, and gain valuable public feedback necessary for effective policy development. The Coast Guard aggressively supports a broad range of standards development organizations through funding, active engagement, and membership on numerous committees. This vigorous participation helps us raise and resolve genuine issues related to public safety, national security, and preservation of the marine environment with our industry partners.

The Coast Guard participates in the DHS Standards Council and the Interagency Council on Standards Policy. We also regularly collaborate with the National Institute for Standards and Technology Standards Directorate on training and conformity assessment issues. Visit our Director of Commercial Regulations & Standards website at for further information.

<http://www.dco.uscg.mil/Our-Organization/Assistant-Commandant-for-Prevention-Policy-CG-5P/Commercial-Regulations-standards-CG-5PS>

2. Please list the government-unique standards (GUS) your agency began using in lieu of voluntary consensus standards during FY 2022. Please note that GUS which are still in effect from previous years should continue to be listed, thus the total number in your agency's report will include all GUS currently in use (previous years and new as of this FY):

No GUS are being used in lieu of existing voluntary consensus standards.

Responses: No Inputs

The following Components responded with no inputs for the FY2022 reporting timeframe:

- OCIO
- PARM
- OGC
- OCFO
- CPO
- OCSO
- S&T Chief Scientist
- S&T OSE (TCD, ORA, TED & TST)

Attachment 2

Component Standards Executive Updated for FY23

CTO	brian.gattoni@hq.dhs.gov	703-235-5031
Chief Data Officer	lon.gowen@hq.dhs.gov	N/A
Deputy Asst. Administrator	paul.judson@fema.gov	202-213-9453
Chief Technology Officer	sunil.madhugiri@cbp.dhs.gov	571-242-1810
Assistant Director/CFO	Donald.lewis@fletc.dhs.gov	912-267-3390
Director	Dana.salvano-dunn@hq.dhs.gov	202-357-7773
Deputy Chief of Staff for Management	sandra.taylor@hq.dhs.gov	202-343-1717
Chief Technology Officer	richard.j.clark@ice.dhs.gov	202-732-7124
Principal Director	charles.wollenhaupt@hq.dhs.gov	202-740-8940
Director - Analysis Division	marc.rosenblum@hq.dhs.gov	202-447-3581
Executive Director, Analysis and Engineering	Erick.Rekstad@tsa.dhs.gov	571-227-1505
Chief Data Officer	elizabeth.a.puchek@uscis.dhs.gov	202-669-1537
Chief - Office of Standards Evaluation and Development	timothy.m.brown@uscg.mil	202-372-2358

Submitted to NIST, Nathalie M. Rioux (Fed) [nathalie.rioux@nist.gov] from DHS Science and Technology (S&T), Systems Engineering & Standards Division, Renee Stevens renee.stevens@hq.dhs.gov / Standards@hq.dhs.gov .