

IEEE GEPS Welcome Webinar:

The IEEE Standards Association (IEEE-SA) and the IEEE Government Engagement Program on Standards (GEPS)

September 2018

Outline

1. Welcome & Round of Introductions
2. Introduction to IEEE, IEEE-SA & GEPS:
 - a) Introduction to IEEE-SA, Key Programs and Priorities, Benefits of IEEE Standards
 - b) GEPS and Expectations of Participants
3. GEPS Participant's Testimonial: Benefits
4. IEEE SASB Operations & Point of Contact
5. Questions and Discussion
6. Wrap-Up and Next Steps

Welcome!



Don Wright, President, IEEE-SA



Jean-Philippe Faure, Chair, Standards Board,
IEEE-SA



Michael Janezic, Chief, Radio-Frequency
Technology Division, National Institute of Standards
and Technology (NIST)



Moira Patterson, Global Affairs Program Director,
IEEE-SA

Dave Ringle, Director, Governance, IEEE-SA

Before We Share our Opinions...

“At lectures, symposia, seminars, or educational courses, an individual presenting information on IEEE standards shall make it clear that his or her views should be considered the personal views of that individual rather than the formal position, explanation, or interpretation of the IEEE.”

IEEE-SA Standards Board Operation Manual (subclause 5.9.3)



Collaboration is our *Foundation*

In Academia

In Industry

In The Field



IEEE brings people and technology together for mutual benefit

IEEE STANDARDS ASSOCIATION



2.a) IEEE at a Glance

Global Reach

420,000
Members



160 Countries



117,000 Student
Members



46 Technical Societies
and Councils



Technical Breath

1,800 Annual
Conferences



4,000,000
Technical Documents



190
Top-cited Periodicals



1,275 Active
Standards



Social Impact

Global Public Policy



Global Humanitarian
Efforts



Continuing Education &
Certification



Ethics in Technology



IEEE Standards Association (IEEE-SA)



20,000

STANDARDS
DEVELOPERS
WORLDWIDE

700+

STANDARDS
UNDER
DEVELOPMENT

1,275+

ACTIVE
STANDARDS

**INDEPEN-
DENT**

ORGANIZATION

IEEE standards span a broad spectrum of technologies, such as:

- Aerospace Electronics
- Broadband Over Power Lines
- Broadcast Technology
- Clean Technology
- Cognitive Radio
- Design Automation
- Electromagnetic Compatibility
- Green Technology
- Ethernet/WLAN
- Medical Device Communications
- Nanotechnology
- Organic Components
- Portable Battery Technology
- Power Electronics
- Power & Energy
- Radiation/Nuclear
- Reliability
- Transportation Technology

IEEE STANDARDS ASSOCIATION



IEEE Standards Association (IEEE-SA)

- **Consensus-building organization within IEEE** that develops and advances global technologies - through facilitation of standards development and collaboration.
- **Promotes innovation**, enables creation and expansion of international markets; helps protect health, public safety.
- **Drives functionality, capabilities and interoperability** of a wide range of products and services that transform the way people live, work and communicate.

Vision:

Be a **world-class**
Standards Development
Organization

Mission:

Provide a **high-quality,**
market-relevant Standardization
environment that is respected
world-wide

IEEE Foundational Standards

IEEE standards are **building blocks** for IoT, manufacturing, intelligent vehicles, healthcare, smart grid, smart cities, and more.

Internet of Things (IoT)

IEEE P2413™



eHealth

IEEE 11073™
Family



Networking/
WLAN

IEEE 802™
Family



Intelligent
Vehicles

IEEE 1609™
IEEE 2030.1.1
™



Smart Grid

100+ active or
in-progress IEEE
standards are
relevant to the
smart grid





IEEE Standards Grow Markets

Evolution of traditional country-based models for standards development to **market-driven models**

Open Process

- Open membership
- Open participation

Consensus-based

- Based on WTO core principles
- Collaboration

eTools

- Facilitate remote participation, lessening travel costs

Global Community

- Participation from around the world

Standardization is borderless:

Global standards sustain products and services for implementation and use by customers in a globalized world



WORLD TRADE ORGANIZATION

Global Collaboration – Relationships



- **ISO/IEEE PSDO Agreement** address adoptions and joint development work between the ISO and IEEE
- Currently covers:
 - ISO TC 204 — Intelligent transportation
 - ISO TC 215 — Health Informatics
 - ISO/IEC JTC 1 — All subcommittees



- **IEC/IEEE Dual Logo Agreement** addresses adoption and joint development of standards. It provides an IEEE Working Group and an IEC Working Group/Project Team/Maintenance Team the ability to develop one standard with an IEC and IEEE logo



- **IEEE is a Sector Member of:**
 - ITU-R (Radiocommunication)
 - ITU-T (Standardization)
 - ITU-D (Development)

Global Agreements

Agreements for national adoption of IEEE standards:

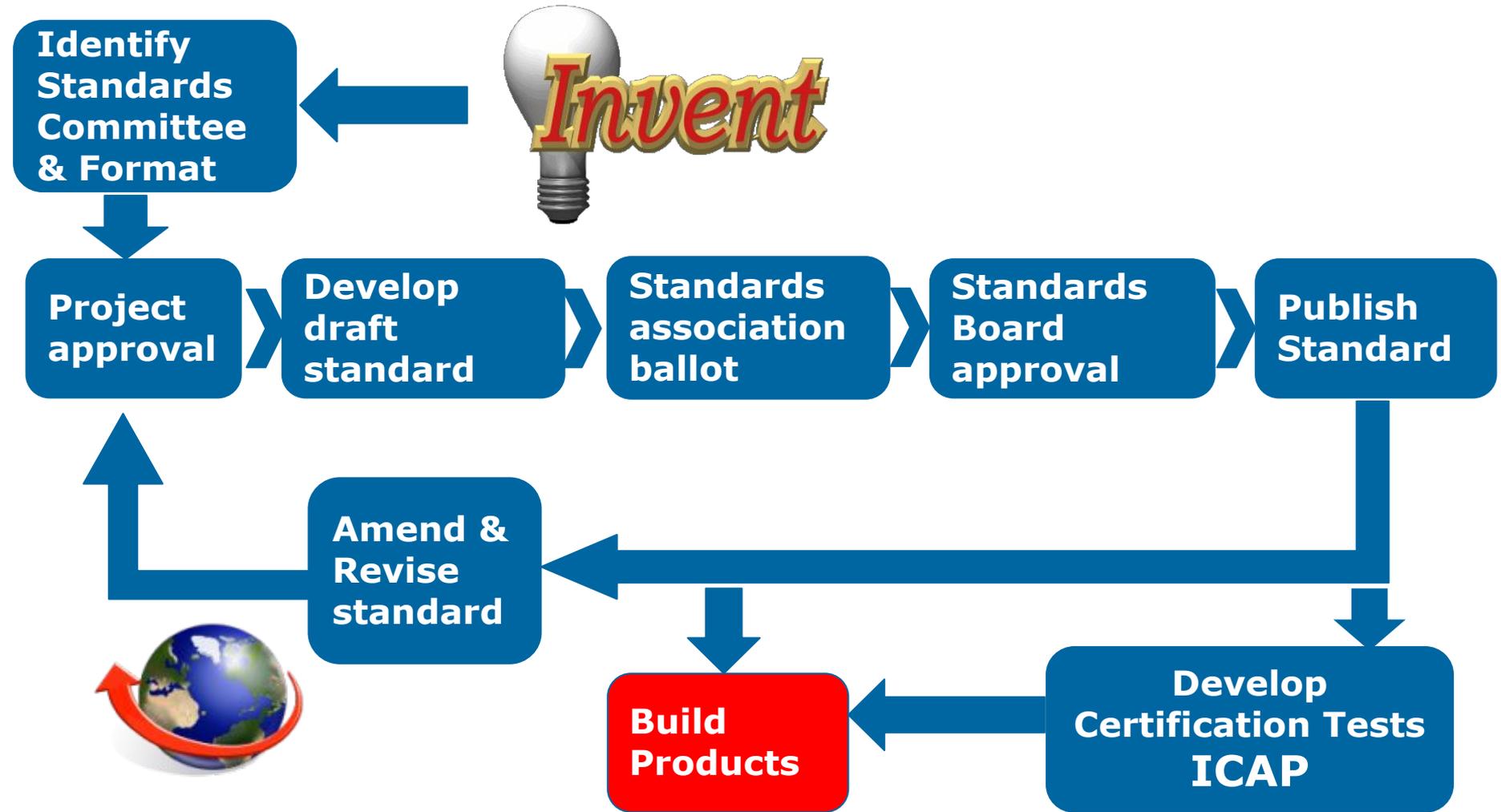
- Countries can adopt existing IEEE standards
- Translation of adopted standards also an option



MOUs with organizations for standards-related cooperative activities, including:

- Joint workshops and events
- Joint deliverables
- Capacity-building
- Technical-level cooperation

IEEE Standards Development Process



Global Standards: Powerful Instruments of Governance

- **Bring stakeholders together from around the world:**
 - Open membership
 - Open participation
- **Built on consensus:**
 - Balance of input and requirements
 - Well-developed, proven process to enable collaboration
- **Presumption not to create unnecessary obstacle to global trade**
 - IEEE standards meet WTO/TBT principles for international standardization

Governments can benefit from the IEEE standards development process, as it is **proven, established, nimble, and evolving.**

IEEE Standards: Benefitting the Public Sector

- **Eliminating cost** of developing in-house agency standards and, therefore, the associated administrative burden on government
- **Decreasing the cost of goods/services** procured by the government
- **Minimizing market fragmentation** and the burden on industry of complying with agency-specific standards that may differ on a regional/country basis
- **Promoting efficiency** and economic competition through global harmonization of standards

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IEEE Standards:

Benefitting the Public Sector – *part 2*

- Facilitating the ability to **keep pace with current technology**
- **Providing opportunities/economic incentives** (e.g. economies of scale) to establish standards that serve national needs through involvement in global standardization activities
- **Facilitating trade** and economic growth
- Fostering **global interoperability**
- **Reflecting the expertise** of IEEE's large global technical community

Protect individuals, consumers
and the environment

How IEEE Standards Benefit the public sector in India & Denmark

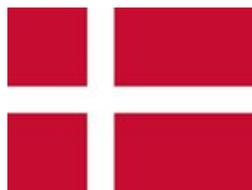
Background

Benefit to Government



- The Indian Ministry of Power (CEA) references IEEE standards in its regulations, e.g.:
 - IEEE 80-2013™ (AC Substation Grounding; safety regulations on substation grounding),
 - IEEE 519-2014™ (Harmonic Control in Electric Power Systems; regulation on distributed resources).

- These IEEE standards help Indian utilities address the requirements imposed by the national Electricity Act.
- No need to develop technical regulations; results in cost- and time savings.



- Facing eHealth system fragmentation, the Danish government adopted guidelines referencing IEEE 11073™, the Personal Health Devices family of standards, as a framework for personal connected health interoperability.

- IEEE standards served as the basis in providing interoperable health device communications protocols to the Danish healthcare system.

How IEEE standards benefit the public sector in Europe & Global

	Background	Benefit to Government
	The EU is rolling out 'WiFi4EU', based on IEEE 802.11 standards, supporting the installation of Wi-Fi™ equipment in community life in Europe.	<ul style="list-style-type: none">• Promotes societal benefit: European communities will be able to benefit from high-speed connections in public spaces by 2020.
Global	<ul style="list-style-type: none">• IEEE 1680™ standards support government goals by simplifying the purchase of sustainable, environmentally preferable electronic products (PC & imaging equipment, TVs, servers). Products meeting IEEE 1680 criteria result in a reduction of hazardous waste.	

2.b) The IEEE Government Engagement Program on Standards (GEPS)

A platform allowing government ministries from around the world to increase their understanding of IEEE's standards process, and to facilitate input on government priorities into IEEE's standardization ecosystem.

The Program aims to:

- **Increase governments' understanding** for the globally open IEEE standardization process,
- **Inform governments** about IEEE-SA's key initiatives,
- **Gain input** from government experts to the Standards Board and other standards-related discussions,
- **Engage with countries from around the world** to foster a global perspective.



Benefits to GEPS Participants

- **First-hand information** about IEEE-SA's activities and plans through customized information channels
- **Opportunity to inform** IEEE-SA's direction and priorities
- **Share views** with thought leaders and other government participants
- **Directly interact** with IEEE-SA volunteer leadership and staff, both locally and globally

Government participants help shape IEEE-SA's activities, leading to mutual benefits for government participants and IEEE-SA.

Opportunities for Appointed GEPS Representatives

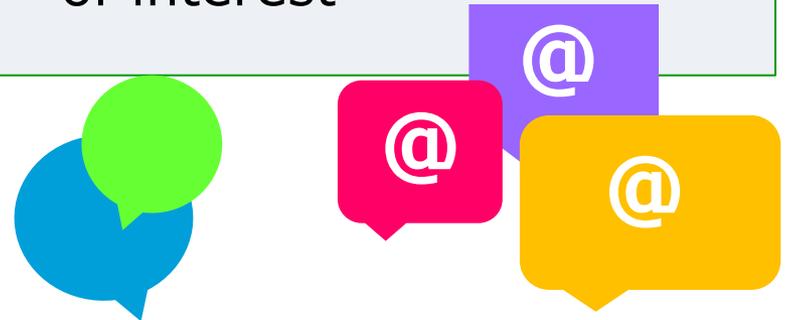
Government entities, via their appointed representative, have an easy entry point into IEEE-SA activities:

In-person

- ✓ IEEE-SASB **meetings** (3 times/year)
- ✓ Provide **written reports** on national standardization initiatives to the board; verbal input upon request
- ✓ Regular **dialog** with IEEE-SA staff and other experts on topics of interest

Online

- ✓ Opt in to GEPS group **email** communications
- ✓ Online **meeting materials**
- ✓ Live **webinars** on topics of interest



IEEE GEPS Representatives

- Rajeev Sharma
Bureau of Indian Standards; BIS
- Hemant Darbari
Centre for Development of Advanced Computing, India; C-DAC
- Ashok Rajput, Vandana Singhal
Central Electricity Authority of India; CEA
- B. K. Badola, Premjit Lal
Telecommunication Engineering Centre, India; TEC
- Seong-hwan Kim, Samyoung Chung
Ministry of Science and ICT, South Korea; MSIT
- Michael Janezic
National Institute of Standards and Technology, USA; NIST
- Thomas Koshy
National Regulatory Commission, USA; NRC

3. IEEE GEPS Participant's Testimonial: National Institute of Standards and Technology (NIST)

NIST's **mission** is to promote U.S. innovation and industrial competitiveness by advancing **measurement science, standards, and technology** in ways that enhance economic security and improve our quality of life.

NIST promotes standards development by:

- performing fundamental research and develop measurement methods that provide the foundation for some standards
- providing technical staff members that participate in private, industry-led standards working groups to support the development of standards

IEEE GEPS - Benefits to NIST

Easily identify areas where NIST technical expertise might be useful for standards development

NIST currently has technical staff participating in **62 IEEE standards working groups** in areas such as:

- Wireless communications (IEEE 802.11, IEEE 802.15, IEEE 802.21)
- Camera phone image quality (IEEE 1858)
- Medical device communications (IEEE 1073)
- Synchronization of real-time clocks of networked devices (IEEE 1588)
- Imaging Performance of X-ray and gamma-ray security screening systems (N42.46)
- Public Key Cryptography (IEEE 1363.3)

IEEE GEPS - Benefits to NIST

Fosters new collaborations between IEEE and NIST in new technical areas

Federated Cloud Computing - NIST and IEEE are working together to create standards to help promote interoperability and improved data transfer between different cloud computing environments.

Wireless Communication in Factories - NIST and IEEE are collaborating on developing guidelines for companies to select the best wireless communications system for a particular industrial environment.

4. IEEE SASB Program Operations and Points of Contact

- IEEE-SA Government Engagement Program:

Moira Patterson, Global Affairs Program Director
m.patterson@ieee.org

- IEEE-SA Standards Board/meetings:

David Ringle, Director, IEEE-SA Governance
d.ringle@ieee.org

5. Questions and Discussion



- For more questions around the GEPS program, please see: <https://standards.ieee.org/content/dam/ieee-standards/standards/web/governance/sasb/geps-faq.pdf> for answers.

6. Next Steps

- Follow-up and feedback
- GEPS group email communications
- Survey: Topics of interest for future webinar

Thank You!

