IEEE GEPS Webinar:

IEEE’s Relationship with other Standards Development Organizations (SDOs)

James E. Matthews
IEEE SA Board of Governors International SDO Advisory Group

08 August 2019, 09:00 EDT / 14:00 UK time / 18:30 IST / 22:00 KST

This call will be recorded. The link will be shared with GEPS participants after the call.
Outline

1. Introductions and roll call (7 min)
2. Introduction to IEEE/IEEE SA (3 min)
3. IEEE standards development process in comparison with other SDOs (5 min)
4. Global collaboration: (20 min)
   a) IEEE’s relationship with ETSI (2 min)
   b) IEEE's relationship with ISO (5 min)
   c) IEEE's relationship with IEC (5 min)
   d) IEEE's relationship with ITU (5 min)
   e) IEEE’s relationship with IETF (3 min)
5. Global Agreements (including national adoptions and MoUs) (5 min)
6. Take-Aways (5 min)
7. Q&A (10 min)
1. Introductions - GEPS Representatives

- Rajeev Sharma  
  *Bureau of Indian Standards (BIS), India*
- Hemant Darbari  
  *Centre for Development of Advanced Computing (C-DAC), India*
- Ashok Rajput, Vandana Singhal  
  *Central Electricity Authority of India (CEA), India*
- Sudhir Bhandari, Premjit Lal  
  *Telecommunication Engineering Centre (TEC), India*
- Simon Hicks  
  *Department for Culture, Media and Sport (DCMS), UK*
- Samyoung Chung  
  *Ministry of Science and ICR (MSIT), South Korea*
- Marla Dowell  
  *National Institute of Standards and Technology (NIST), USA*
- Thomas Koshy  
  *National Regulatory Commission (NRC), USA*
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
The world's largest professional association

- **Global Reach**
  - >422,000 Members
  - 160 Countries
  - 124,000 Student Members
  - 46 Technical Societies and Councils

- **Technical Breadth**
  - 1,800 Annual Conferences
  - 4,000,000 Technical Documents
  - 190 Top-cited Periodicals
  - 1,300 Active Standards

- **Social Impact**
  - Global Public Policy
  - Global Humanitarian Efforts
  - Continuing Education & Certification
  - Ethics in Technology

IEEE Standards Association
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.
IEEE SA is part of IEEE

- IEEE Standards Association is the globally recognized standards-development and collaboration organization of IEEE
- Borderless commerce and technology/market convergence are magnifying the importance of global standards
- With the vast range of IEEE expertise, IEEE SA is not limited to a single technology area
  - Important as technological, industrial, and geographic lines are blurring

Example

Smart Grid
100+ relevant active or standards in development
IEEE 2030®, world’s first system-of-systems, foundational standard

Example

Internet of Things (IoT)
IEEE P2413™ project intended to offer a reference model
3. IEEE Standards Development Process

1. Identify Standards Committee(s)
2. Project approval
3. Develop draft standard
4. SA ballot
5. Standards Board approval
6. Publish Standard
7. Amend & Revise standard
8. Develop Certification Tests ICAP
Different Paths: Standards Development

Individual Method

- Participants are individual technical experts
- Individuals represent themselves
- Each individual participant has 1 vote
  - Ballot groups are made up of a minimum of 10 individuals
  - Ballot group participants must be IEEE-SA individual members

Entity (Corporate) Method

- Participants are “entities,” i.e., companies, universities, government bodies, etc.
- Designated representative and alternate represent the entity
- Each entity has one vote
- Requires 3 IEEE-SA corporate member entities
- Entity sends representatives to meetings

- Open membership, participation, and governance
- No restrictions
- Any individual or organization
- Includes academia
- Any industry or size of company
Global Collaboration and Relationships

Instances of IEEE SA global collaboration with other SDOs – relationships are numerous and varied

**Observers and document exchange with ETSI and ISO**

- ISO/IEEE Partner Standards Development Organization (PSDO) Agreement: adoptions and joint development work - currently covers:
  - ISO/TC 204: Intelligent Transportation Systems
  - ISO/TC 215: Health Informatics
  - ISO/IEC JTC 1: All Subcommittees

**Sector member of:**
- ITU-R (Radio communication)
- ITU-T (Standardization)
- ITU-D (Development)

**IEC/IEEE Dual Logo Agreement**
- IEC/IEEE Jnt Dvlpmt Agreement: adoption & joint dvpmt of standards (both logos)
  - IEEE category A liaison:
    - TC 51, SyC LVDC, SC 77A
    - ISO/IEC JTC 1/SC 6,7, 27, 31, 38, 42
  - IEEE observer in SMB

**IEEE agreement with the Internet Engineering Task Force (IETF):**
- Close collaboration with IEEE 802 Community (IEEE 802 LAN/MAN Standards Committee)
- Partnering on technology governance issues
Benefits of Global Collaboration

- Global collaboration helps to ensure the coordination of standardization work and the harmonization of standards.

- Existing global standards jointly developed by IEEE provide solutions to industry needs, avoid unnecessary duplication, and can be leveraged for technology transfers, interoperability and global marketability, thus supporting import/export.
Examples of joint logo adoptions


5. 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
6. Take-Aways

IEEE standards development process:
- Rooted in **consensus, due process, openness, right to appeal** and balance,
- Adheres to the [WTO/TBT principles for international standardization](https://www.wto.org)

IEEE SA works closely with other entities to facilitate:
- Standardization of compatible solutions,
- Adoption or coordination of standards to leverage existing knowledge.
  - Developing countries can have access to existing technologies standards to help meet their countries’ technical needs.

IEEE strives for broad representation of all interested parties, including of GEPS representatives. It encourages global participation in the standards development process.
7. Questions & Answers
THANK YOU
IEEE Resources

- IEEE Adherence to the World Trade Organization Principles for International Standardization: 

- The IEEE SA Standards Board: 
  https://standards.ieee.org/about/sasb/

- The IEEE SA Government Engagement Program: 
  http://standards.ieee.org/about/sasb/geps-faq.pdf

- Standards, Innovation and their Role in the Context of the World Trade Organization: 
IEEE SA Complete Business Lifecycle

**Industry Connections** program addresses emerging technology issues where the needs for standards and related services are at the early formation stage

− a venue for member collaboration to address new technology issues

The **IEEE Standards Development** process produces results that reflect the collective, consensus view of participants and enables industry to achieve specific objectives and solutions

The **IEEE Conformity Assessment Program (ICAP)** facilitates the development of test suites, test programs and certification services to assess whether standards are “met”