

IEEE STANDARDS ASSOCIATION

RAISING THE WORLD'S STANDARDS

An Overview



About Myself

- Senior Program Manager at IEEE, Co-Lead for Telecom and Connectivity Practice for IEEE Standards Association and supporting other practices in Asia Pacific Region.
- Working with IEEE since 2007 in various roles & responsibilities. Overall Industry experience of 25+ years in Software Application Development.
- Views expressed are my own!





ADVANCING TECHNOLOGY FOR HUMANITY

ABOUT IEEE

- Inspiring a global community of innovation
- Where forward-thinking professionals collaborate to:
 - Discover what's next in tech innovation
 - Build technical communities
 - Shape and share research
 - Engage in Humanitarian activities
 - **Create global standards**

IEEE - ADVANCING TECHNOLOGY FOR HUMANITY

The World's Largest Professional Association

Global Reach

420,000
Members



160 Countries



117,000 Student Members



46 Technical Societies and
Councils



Technical Breath

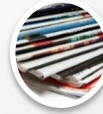
1,800 Annual Conferences



5,000,000
Technical Documents



190
Top-cited Periodicals



1,300 Active Standards



Social Impact

Global Public Policy



Global Humanitarian Efforts



Continuing Education &
Certification



Ethics in Technology



RAISING THE WORLD'S STANDARDS

ABOUT IEEE SA

Developing market relevant open standards and solutions:

- Advancing global technologies and technology platforms
- Promoting innovation
- Protecting public safety, health & wellbeing
- Contributing to a sustainable future

IEEE SA BY THE NUMBERS

1500+

STANDARDS
& PROJECTS

380+

CORPORATE
MEMBERS

7500+

INDIVIDUAL
MEMBERS

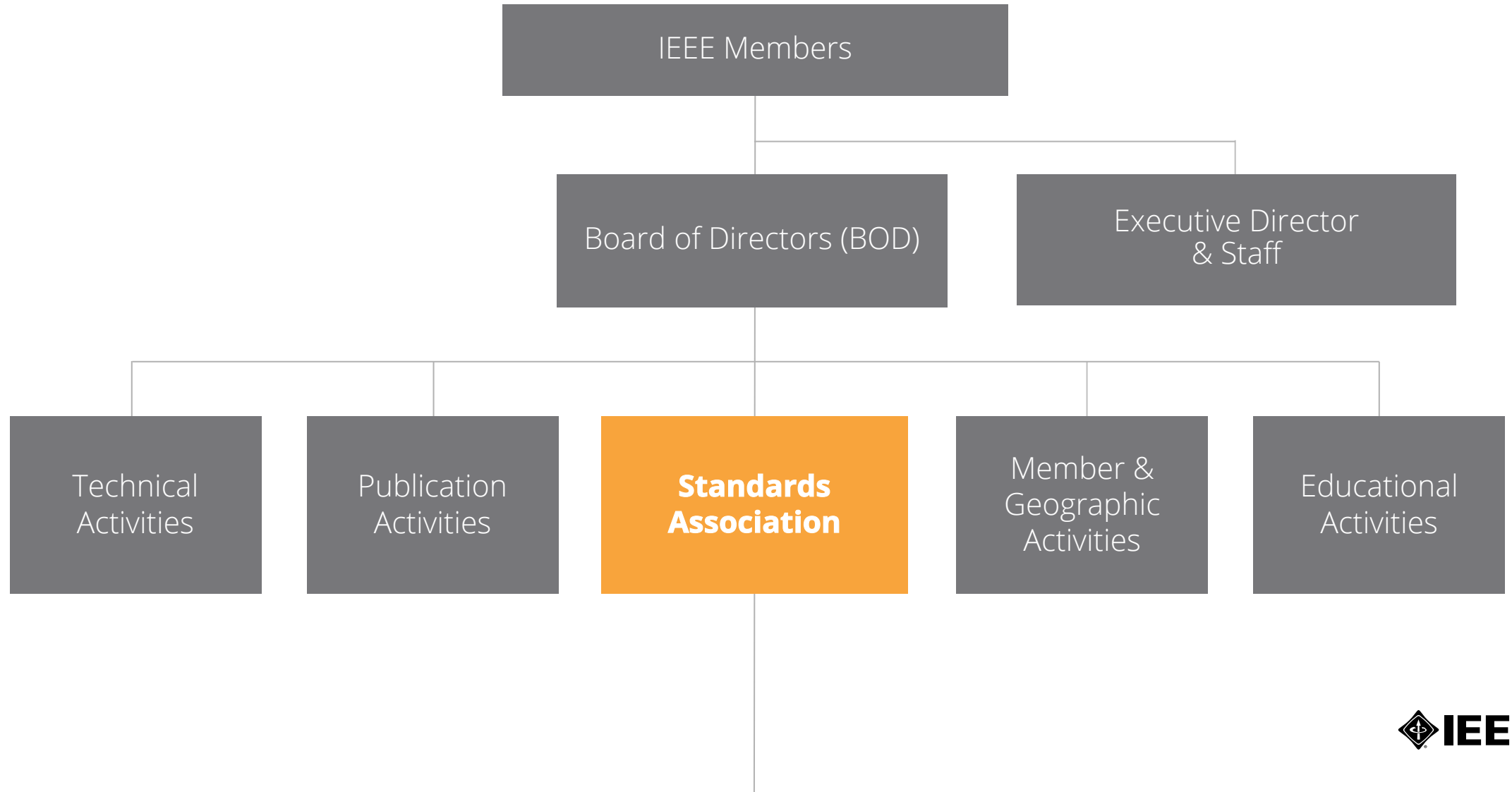
34,000+

GLOBAL PARTICIPANTS

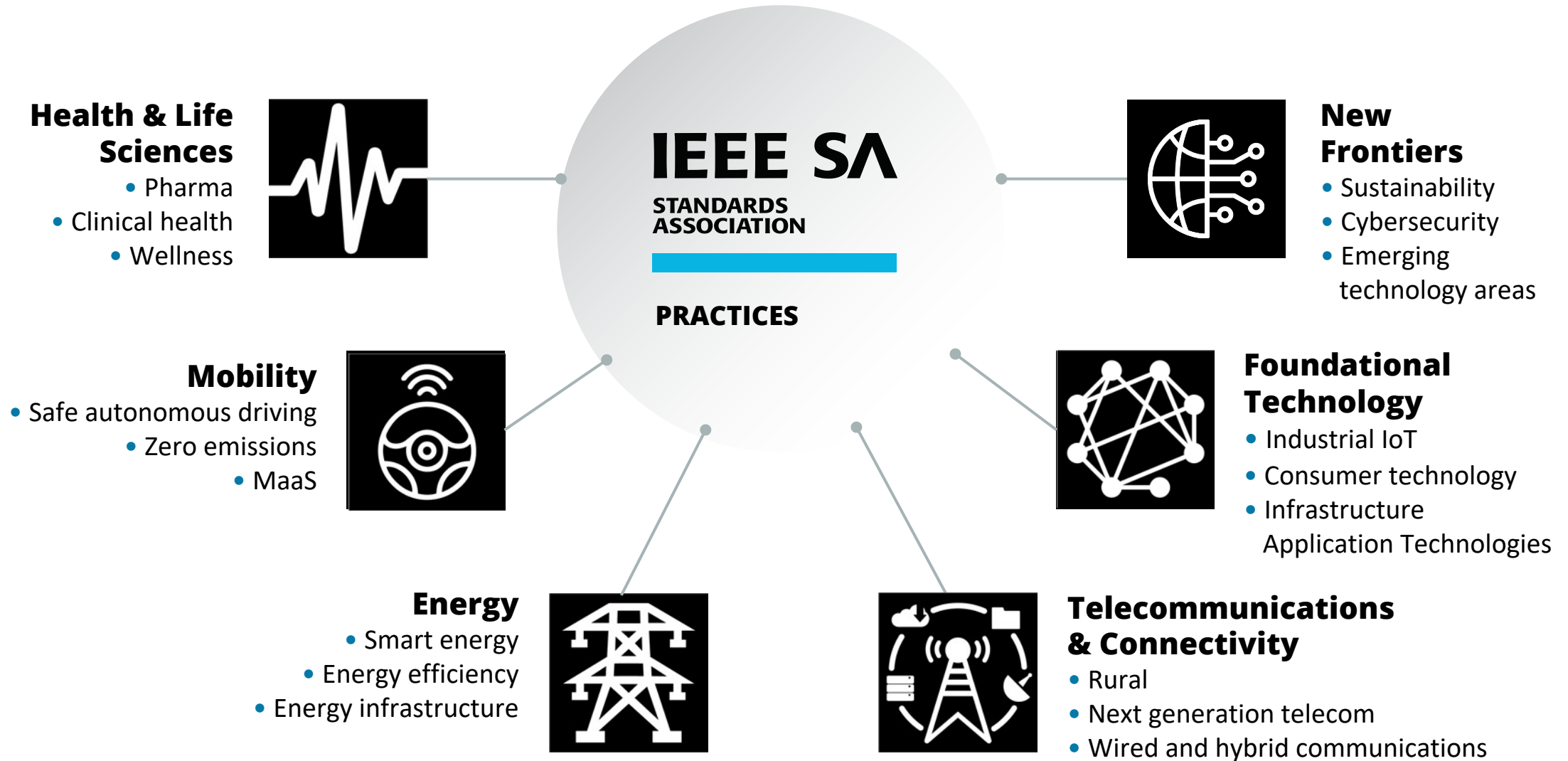
180+

GLOBAL AGREEMENTS

IEEE STANDARDS ASSOCIATION AN OU INSIDE OF IEEE



IEEE SA CENTERS OF COMPETENCE



Addressing global problems through community and consensus.

IEEE SA PORTFOLIO OF PROGRAMS



Industry Connections

Exploring & incubating new tech & its use



Standardization

Creating markets & protecting public safety through standards development



Membership

Connecting to experts & resources with advanced participation options



Conformity Assessment

Providing confidence & assurance & accelerating market adoption



Open Source

Providing a community-powered platform to support open source projects



Alliance Management

Providing support to alliances & trade associations



Registries

Providing unique identifiers to support global compatibility & interoperability



Industry Affiliate Network

Assisting industry organizations in accelerating development and adoption of global standards

INDUSTRY CONNECTIONS

Incubating pre-standards activity and related products and services by facilitating collaboration among organizations and individuals as they hone and refine their thinking on rapidly changing technologies.



OVERVIEW

Over 50 programs in a broad range of areas—including AI, Blockchain, Big Data, Digital Inclusion, Information Security, Networking and more.

PRODUCING

- Standards Roadmaps
- New Standards Proposals
- Workshops and Events
- White Papers
- Technical Specifications
- Databases and Registries

FEATURING

- Responsible Innovation of AI and Life Sciences
- Meta Issues in Cybersecurity
- Blockchain
- Children's Online Safety
- Smart Cities and Electric Vehicles

STANDARDIZATION

Creating markets and protecting public safety and well-being through standards development.



OVERVIEW

1500+ standards in a broad range of industries—artificial intelligence systems, power and energy, consumer electronics, biomedical and healthcare, information technology, telecommunications, transportation, and more.

- Over 35,000 participants from over 160 countries

PROVIDING

- Development of globally open, market-driven standards that are voluntarily adopted, based on merit
- Collaboration and consensus-building platforms that adhere to fair and equitable practices, proven policies and procedures
- Two methods of standards development:
 - Individual
 - Corporate

SOME EXAMPLES

- Distributed Energy Resources—IEEE 1547™ enabling smart interconnection and interoperability with the electricity grid
- Ethernet & WIFI—IEEE 802® standards keeping the world connected
- AI Systems—IEEE 7000™ standards addressing ways to protect personal data and ensure safety in AI systems

MEMBERSHIP

Members of the IEEE SA community work to create, use, and expand standards and other consensus platforms so that they become the basis of marketplace innovation that benefits users and humanity.



INDIVIDUAL MEMBERSHIP

For individual professionals interested in participating in consensus development within the IEEE SA.

- Over 7500 individuals

CORPORATE MEMBERSHIP

For companies in which standards and other consensus activities play a pivotal role in research, product development, and marketing.

- Over 375 companies from 25 countries

BENEFITS

- Vote on standards
- Hold working group leadership positions
- Elect IEEE SA governance
- Access to industry leaders and technical experts

CONFORMITY ASSESSMENT & CERTIFICATION PROGRAM

Accelerating market adoption and streamlining implementation through the development of assessment programs that verify and certify the adherence of products and services to IEEE standards and established industry criteria.

OVERVIEW

Partner with IEEE Standards Working Groups, test laboratories, and other key stakeholders, such as utilities, telecom operators, and manufacturers to develop industry conformity assessment programs through well-defined processes and procedures.

PROVIDING

- Oversight of testing and certification activities to provide confidence that a product or service conforms to IEEE or industry standard
- Certificate issuance
- Test plans, suites and certification scheme development to reduce testing burden on manufacturers
- Test lab assessment and authorization

EXAMPLES

- Sensors Certification—IEEE 2510
- Phasor Measurement—IEEE C37.118
- Electric Vehicle Charging—IEEE 2030.1.1
- Distributed Energy Resources Interconnection—IEEE 1547-2018
- Precision Time Protocol Power Profile—IEEE 1588
- Camera Phone Image Quality—IEEE 185
- Nuclear Power Electrical Equipment—IEEE 60780-323-2016

TRAINING + DEVELOPMENT

Sharing best practices for standards development and preparing the leaders of tomorrow.



OVERVIEW

Fosters individual and organizational effectiveness and enables the success of our standards volunteers as they work in an expanding portfolio of global standards.

PROVIDING

- Quality, relevant and timely information on best practices for standards development

COVERING

- Understanding IEEE SA culture
- Navigating policies and procedures
- Implementing strong leadership skills, tools, and more.

REGISTRIES

Giving products within a specific category, such as mobile or personal health devices, create definitive, unique identifiers that give them the ability to recognize and communicate with each other without conflict.



OVERVIEW

13 different standards-related registries

PROVIDING

- Registry Management Solutions
- Custom Registry Solutions
- Manufacturer Identifier Solutions

FEATURING

- Individual Address Blocks (IAB)
- Manufacturer IDs
- Standard Group MAC Addresses
- Unique Registration Numbers (URN)
- EtherType Values

ALLIANCE MANAGEMENT SERVICES

Providing industry alliances and trade associations worldwide with turnkey legal and operational support.



OVERVIEW

Partner with the IEEE Industry Standards and Technology Organization (ISTO) to manage the day-to-day activities of industry groups, allowing consortia leadership to focus on their missions, objectives, and goals.

PROVIDING

- Consortia Management Solutions
- Consortia Legal Solutions
- Consortia Operational Solutions
- Consortia Event and Meeting Solutions

FEATURING

- VoiceXML Forum
- Wireless Power Consortium
- MIPI Alliance
- UPTANE, and more

IEEE SA OPEN

A comprehensive open source development platform combining the power of open source development tools with IEEE's unparalleled member network, technical expertise, and resources to accelerate technical advances and marketplace innovation.

OVERVIEW

Enabling independent software developers, startups, projects, academia, foundations, and industry organizations around the world to create, test, manage, and deploy innovative projects in a collaborative, safe, and responsible environment.

PROVIDING

Infrastructure for open source software, open hardware, and open data projects with...

- Community management
- DevOps infrastructure
- Governance
- Philanthropic funding opportunities

ON THE PLATFORM

- 140+ groups
- Over 960 users
- 442+ projects

INDUSTRY AFFILIATE NETWORK

Broad-based growth platform focused on bringing together consortia, industry alliances and other industry organizations seeking to rapidly evolve their specifications into global IEEE standards.

OVERVIEW

Built upon IEEE consensus processes to achieve open and accepted standards, multi-stakeholder industry organizations use the network to quickly evolve their existing market-relevant specifications into IEEE standards—leveraging IEEE SA's proven capabilities for global distribution, publishing, branding and marketing.

PROVIDING

An open and strategic framework to identify and engage organizations to:

- Drive global market visibility and acceptance
- Enable the creation and release of new market-relevant standards
- Accelerate paths from specifications to standards development

IN THE NETWORK

- MIPI Alliance
- Acellera System Initiative
- Accord Project
- Data Trading Alliance
- OpenFog Consortium

POLICY ENGAGEMENT

- Contributing to global discussions at the intersection of technology, standards, policy and regulation.
- Helping Policymakers, Government Officials and National Standards Bodies stay current of the latest developments in IEEE standardization.



Governments around the world, including European Commission, Estonia, India, UAE, UK, US



IEEE GOVERNMENT ENGAGEMENT PROGRAM ON STANDARDS (GEPS)

BENEFITS OF THE GEPS PROGRAM

Developed for government officials from around the world, GEPS provides participants with standards and technology information tailored to their organization's needs and where they gain strategic insights into IEEE standardization.

Questions? [Read our FAQ »](#)

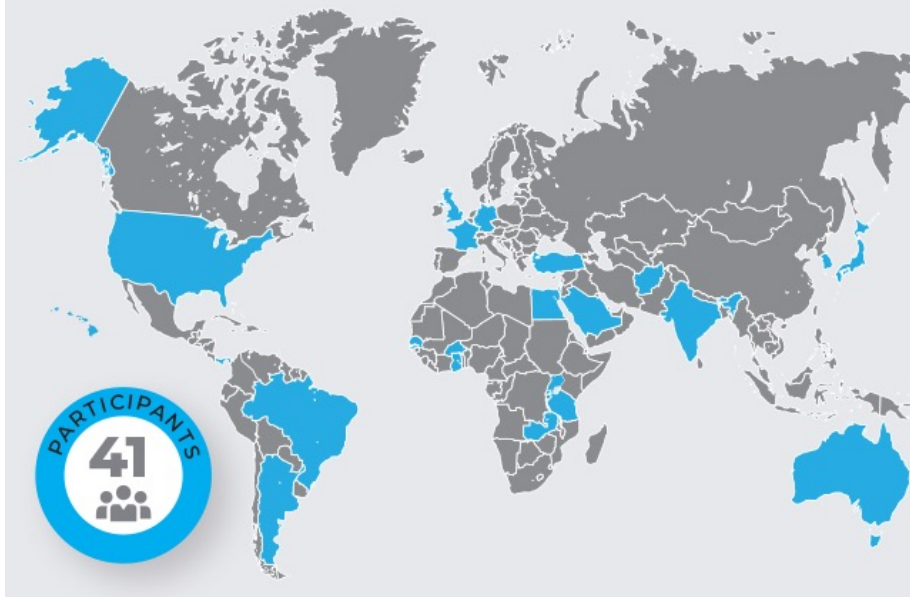
- Bespoke, **free of charge** program tailored to standardization areas of interest
- **Direct dialog** with technical and standards experts, SA leadership, and fellow GEPS representatives
- **New standards activities** information
- **Tailored webinars** created around requested topics
- **Invitations** to attend IEEE SA Board meetings
- Dedicated IEEE SA contact

WHAT PARTICIPANTS DO

- Take advantage of resources that their organization finds useful.
- Communicate information needs related to standardization
- Participate in webinars and bi-lateral consultations with IEEE technical and standards experts
- Attend IEEE SA Board meetings
- Share thoughts on standardization priorities in their country



REPRESENTATIVES FROM 35 COUNTRIES on 6 CONTINENTS



THE GOALS OF THE PROGRAM

- Keep governments apprised of emergent standards and new initiatives
- Increase governments' understanding of the IEEE standards development process and how to utilize it most effectively
- Inform IEEE as to governmental standards needs and receive input on the standardization ecosystem



REPRESENTING GOVERNMENT BODIES IN VARIOUS AREAS



IEEE SA STANDARDS FELLOWSHIP PROGRAM

ABOUT THE STANDARDS FELLOWSHIP PROGRAM

A capacity-building program for professional staff from national standards bodies and government bodies that strengthens knowledge about IEEE standards development through informative workshops and ongoing information exchange. **Questions? [Read our FAQ »](#)**

REPRESENTING

- National standards bodies
- Regulatory bodies
- Regional standards bodies
- Academic institutions
- Nonprofit organizations



REPRESENTATIVES FROM 34 COUNTRIES on 5 CONTINENTS



BENEFITS

- Practical understanding of the IEEE standards ecosystem, from standards incubation and development to conformity assessment and open source
- Access to IEEE technical and standards experts
- Collaboration with colleagues from standards bodies and other organizations
- Opportunities to explore means for cooperative activities
- Visibility among a global audience of standardization experts from industry
- Strengthened relationships with IEEE and other standards bodies or ministries



ACTIVITIES

- Attend IEEE Standards Board meetings
- Participate in tutorials on the latest IEEE standards work
- Take part in robust discussions on timely standards topics, issues and opportunities
- Lead topical roundtable discussions
- Have opportunities to observe and contribute to IEEE working groups



GLOBAL COLLABORATION – RELATIONSHIPS



- 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.



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



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

AGREEMENTS WITH OTHER ORGANIZATIONS



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

Thank You



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