

Participating in Standards Activities for Quantum Technologies

Standards drive innovation, efficiency, and market access. Engagement in standards development gives businesses a voice in shaping the rules, reducing compliance costs, and gaining early insight into industry trends. Engagement in standards development is a strategic investment that enhances credibility, competitiveness, and consumer confidence while influencing the future of quantum technologies.

IEC-ISO JOINT TECHNICAL COMMITTEE ON QUANTUM TECHNOLOGIES (JTC3)

Engagement Model

National (One Country, One Vote)

Scope

Computing, simulation, communications, metrology, detectors, and sources

Current Initiatives

Foundational terminology, addressing inconsistencies and overlaps in existing technologies and supporting interoperability and consistent communications

Key Working Groups

Several ad hoc groups (AHGs) focused on communication, sensors, computing, simulation, random number generators, and enabling technologies.



How to Get Involved

Join the U.S. National Committee (USNC) of the IEC Technical Advisory Group (TAG) to IEC-ISO JTC3 by contacting the U.S. TAG Chair, Brian Montgomery, at brian.montgomery@nist.gov

Additional Resources

- [International Electrotechnical Commission \(IEC\)](#)
- [USNC of the IEC](#)

IEEE STANDARDS ASSOCIATION (IEEE-SA)

Engagement Model

Organizational (One Organization, One Vote)

Scope

Computing architectures performance and benchmarks, interfaces, interoperability

Current Initiatives

IEEE Quantum Initiative, Education Portal, terminology, computing performance benchmarks, computing architecture, cryptographic migration, software-defined communications

Key Committees

Quantum Technical Committee (QTC), Quantum High Performance Computing (HPC) Working Group



How to Get Involved

Join the IEEE QTC [here](#).

Additional Resources

- [IEEE Quantum Technical Community \(QTC\)](#)
- [List of Current IEEE-SA Standard Efforts](#)
- [HPC Working Group](#)

QUANTUM ECONOMIC DEVELOPMENT CONSORTIUM (QED-C)

Engagement Model

Prestandardization engagement (not a standards development organization)

Scope

The Standards & Performance Metrics Technical Advisory Committee (TAC) identifies ways to encourage development of standards and performance metrics.

Current Initiatives

Accelerating commercialization of quantum-based products and services, connecting members with relevant standards development organizations, landscape analysis

Key Subcommittees

Computing, Networking and Sensing



How to Get Involved

Join QED-C [here](#).

Additional Resources

- [Standards & Performance Metrics Technical Advisory Committee](#)

Gearing Up for Standards Development Participation



BEFORE

Prepare: Strong Preparation Drives Better Outcomes

- ✓ Understand the rules and procedures of the standards development organization (SDO), including Robert's Rules
- ✓ Review the meeting agenda and minutes from the previous meeting
- ✓ Align internally with anybody else from your organization this participating
- ✓ Understand various stakeholders and their motivations
- ✓ If attending an international meeting, understand cultural norms and communication



DURING

Engage: Relationships Drive Influence

- ✓ Listen actively to understand other's positions
- ✓ Build alignment and seek mutual benefit
- ✓ Seek mentorship from more experienced members
- ✓ Look for common ground and frame solutions as mutually beneficial
- ✓ Volunteer for tasks groups or leadership roles to build trust and rapport
- ✓ Contribute your technical expertise
- ✓ Remember that you do not need to be a standards expert on day one



AFTER

Follow Through: Consistency Builds Credibility

- ✓ Debrief and share outcomes internally with your organization
- ✓ Follow up with new contacts and allies
- ✓ Contribute between meetings
- ✓ Track and respond to ballots
- ✓ Follow through on any tasks you were assigned or volunteered for

WHERE THE REAL WORK HAPPENS

The real standards work often happens outside of formal meetings

- Engage with others during breaks, meals, and informal conversations
- Test your ideas and proposals before formal discussion
- Get to know other members on a personal level to build trust and rapport



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