INTRODUCTION TO CONFORMITY ASSESSMENT
UNDERSTANDING CONFORMITY ASSESSMENT

What is Conformity Assessment?
- Conformity Assessment is the process or processes that are used to demonstrate that a product or service meets specified requirements (set forth in Standards, Test Plans, etc.)

Conformity Assessment Benefits
- Provides manufacturers a proven method of demonstrating compliance to the requirements
- Empowers the end-user to make better purchasing decisions
- Benefits the supplier as products can quickly gain market acceptance
- Increases the likelihood of a stable technology in the market with robust products

Conformity Assessment Activities Include:
- Conformance, Commissioning, Interoperability, Inspection, Accreditation
- Test Suite Specification development
- “Catch-all” term to address range of test-related activities
TYPES OF CONFORMITY ASSESSMENT

- **1st Party / Suppliers Declaration of Conformity (SDOC)**
  - Self Declaration; Companies conduct their own testing

- **2nd Party Conformity Assessment**
  - Conformity assessment conducted by the end purchaser of products (e.g., Service Providers) to ensure purchased products are deemed compliant or interoperable

- **3rd Party Conformity Assessment**
  - Conformity assessment being determined by an independent body.

Related International Standards

- Accreditation Bodies – ISO/IEC 17011
- Certification Bodies - ISO/IEC 17065
- Test Labs – ISO/IEC 17025
BENEFITS OF CONFORMITY ASSESSMENT

- Provide manufacturers a proven method of demonstrating compliance
- Shared resource of testing laboratories and test tools
- Enhance interoperability
- Empower end-user to make better purchasing decisions
- Encourages quicker and wider market acceptance of products
- Facilitates a stable technology in the market with robust products
ICAP COMPLETES THE IEEE-SA BUSINESS/STANDARDS LIFECYCLE

ICAP is a Program of IEEE-SA
IS YOUR WORKING GROUP INTERESTED IN CONFORMITY ASSESSMENT?

• IEEE offers in-house capabilities & expertise to all IEEE WGs
• Immediate approval of conformity assessment initiatives/committees
• Access to test plan, legal agreement and certification scheme templates
• Access to global testing laboratories
• Use the IEEE Certified Logo and branding
VALUE OF IEEE CERTIFICATION

**Convenience**
- Intrinsic connection with IEEE-SA working groups and supporting staff
- Enable certification programs based on converging technologies that covers multiple technologies IEEE-SA works on

**Credibility**
- Only ICAP certifications come with the IEEE Certification mark
- IEEE maintained Certified Product Registry

**Full-Spectrum Service**
- Turnkey Certification Management program, including Conformance, Interoperability, Inspection, Accreditation
- ICAP strategically aligns with global expert test labs to provide the best level of testing and field evaluation support
- Legal and operational umbrella for testing & conformity assessment programs
- Test Suite & Specification Development
- Self-Validation Suite Development
- Inspection and Verification
PILLARS TO A SUCCESSFUL PROGRAM
Certification Program Development Timeline

Standard –> Test Specs - > Program Launch

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<th>9 months – 2 Years</th>
<th>6 months – 1 Year</th>
<th>6 months+</th>
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- Standard Develops
- Standard Approved
- Test Specifications Developed
- Product Availability and Readiness
- Conformity Assessment Program Launch

Timeline:
- 9 months – 2 Years
- 6 months – 1 Year
- 6 months+
IEEE CERTIFICATION MARK

• Use of the IEEE Certification mark is only through ICAP managed certification programs
• Customizable for individuals programs by standard number and/or a short program description, i.e. Telecom, EV Charging, Synchrophasor, IEEE 193X, 2558 etc.
IEEE CERTIFIED PRODUCTS REGISTRY
CERTIFIED PRODUCTS REGISTRY

- A public registry:
- Administered by the certification body/authority
- A venue for manufacturers to publicize their certified products
- A resource for end-users to verify product models that are compliant
- May address derivative products and software/firmware modifications
- May differentiate conformance to various versions of standards and/or test plans
WHY ICAP?

- Diverse portfolio of programs
- 80+ ICAP Voting Members
- 100+ Global Organizations represented within ICAP Committees
- 1000+ participants in ICAP related certification programs and events (Workshops, Panel Sessions, Round Tables)

standards.ieee.org/icap
VALUE-ADD OR BI-PRODUCTS OF CONFORMITY ASSESSMENT

Alliance or Committee formation
• Participate in conformity assessment program development (voting rights)
• Package services for program development

Technical Documents
• Test Suite Specifications, Test Plans, White Papers, Implementation Guides, etc

Smart Registries
• Interactive and searchable content of products
• Metadata Dictionary

Software-as-a-Service (SaaS)
• Management of test, certification and reports during life of deployment of products

Workshops & Training
• Educational (professional development)
• Personnel credentialing (e.g. PMP)

Interoperability Plugfests/Events
• Opportunity to demonstrate functioning of products as part of a larger system
SAMPLE PROCESS FOR CA PROGRAM DEVELOPMENT

Approval by ICAP MGT
- Complete ICAP New Program Form
- Determine high level funding structure
- Submit to ICAP for Review
- ICAP Director will present to MGT for approval

Formation of IEEE Conformity Assessment Committee (CAC)
- ICAP to send invitation to companies to join the IEEE CAC
- Select Officers (Chair/V-Chair)
- Create Policies and Procedures
- Develop membership fee structure for ICAP support
- Plan budget for marketing initiatives and develop plan
- Recruit companies to join

IEEE CAC Deliverables
- Develop Draft Test Plans
- Develop Certification Program Scheme (IEEE Approved Template is Available)
- Lab Approval Process
- Product certification process
- Rules for recertification
- Develop certification logo and registry
- Execute marketing plan
- Legal agreements (for labs and applicants for certification)

Launch Certification Program (IEEE BOG Approval Required)
- Laboratory Approval
- Recruit Testing laboratories
- Sign agreements with testing laboratories (IEEE Approved Template is Available)
- Conduct Laboratory audit
- Pilot Testing
- Recruit Vendors to submit products
- Vendors to sign certification agreement with IEEE (IEEE Approved Template is Available)
- ICAP will develop Certification and Lab approval fees
THANK YOU

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BACKUP SLIDES
CONFORMITY ASSESSMENT CERTIFICATION SCHEME – SINGLE SCHEME

- ISO/IEC 17011 + Competency requirements
- ISO/IEC 17065 + competency requirements
- ISO/IEC 17025 + competency requirements

Products

Certification Body(ies)

Accreditor(s)

Laboratory(ies)

Oversight & Communication

Agreement

Scheme Owner

harmonizes technical requirements

Courtesy of G.Gillerman @ NIST