# IEEE Conformity Assessment Program (ICAP)

June12, 2013

IEEE CONFORMITY ASSESSMENT PROGRAM

# Understanding Conformity Assessment

# Understanding Conformity Assessment

- What is Conformity Assessment?
  - Conformity Assessment is defined as 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
  - Provides assurance and confidence a product or service meets requirements
  - Empowers the user to make better purchasing decisions
  - Benefits the supplier as products may gain market acceptance
- Conformity Assessment Activities Include:
  - Conformance, Interoperability, Inspection, Accreditation
  - "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

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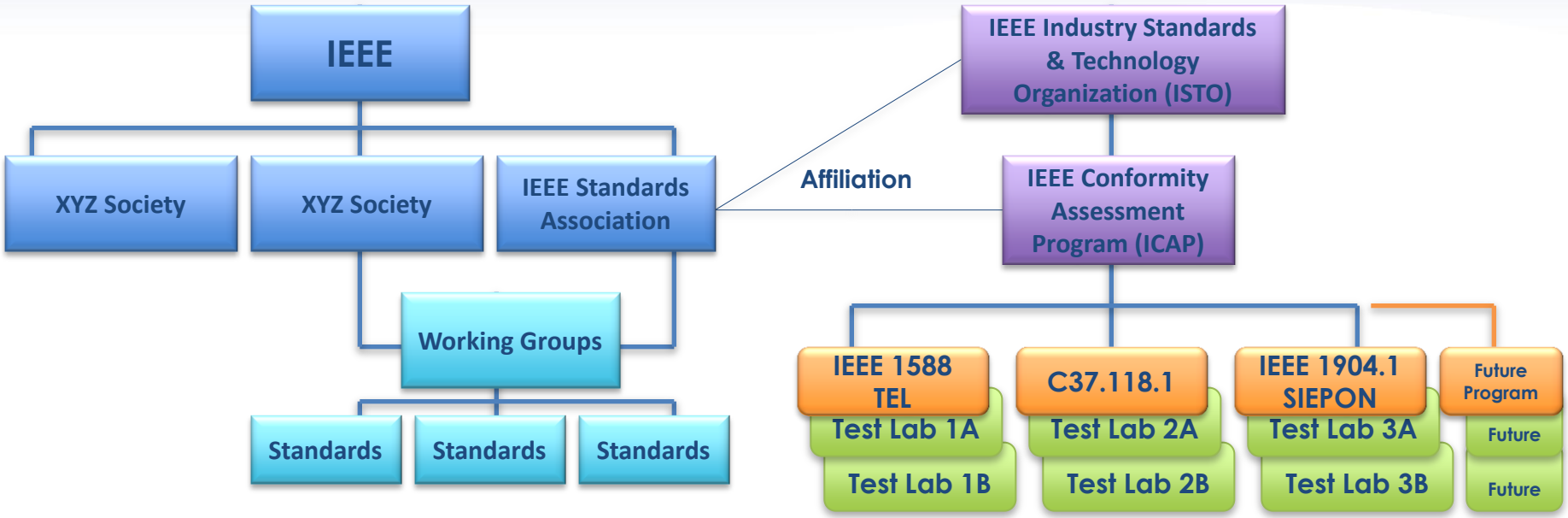
# ICAP Introduction

# ICAP Completes the IEEE-SA Business/Standards Lifecycle


ICAP is a Program of IEEE-ISTO Supported by IEEE-SA

# ICAP Introduction




**ICAP:** Provides programs and industry support and an operational structure that help bridge those standards development activities with the conformity assessment activities that accelerate market acceptance and enablement of new products and technologies in support of IEEE Standards.

ICAP is governed/supported by an agreement between IEEE-SA and IEEE-ISTO

# ICAP and Conformity Assessment

Encompass all aspects of Conformity Assessment – Self Declaration, 3rd Party Assessment/Testing, Interoperability (via events or plugfests, etc.)

## Understanding ICAP

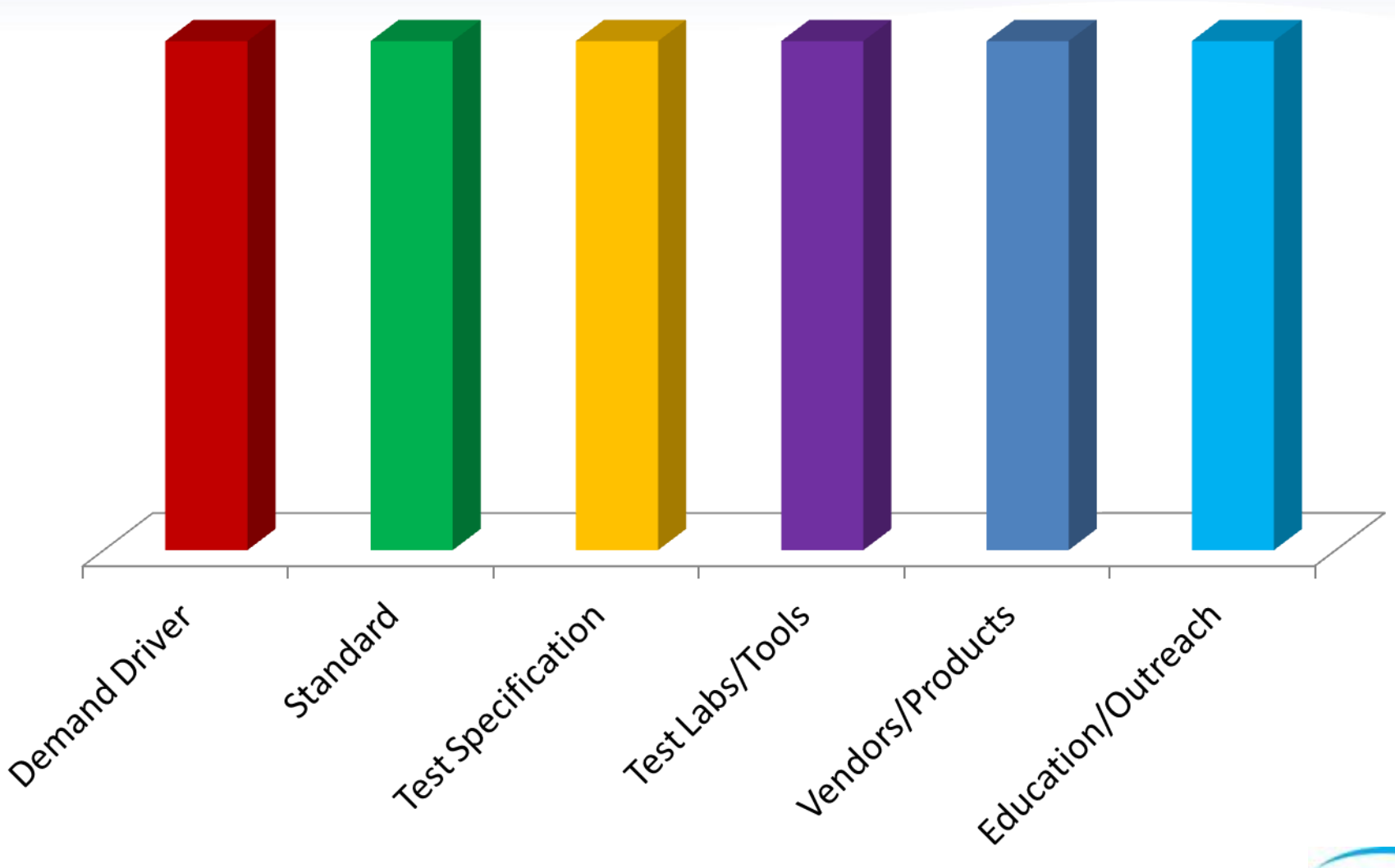
- ICAP provides legal and operational umbrella for testing & conformity assessment programs
- **Certification Authority focused** on full testing spectrum for **IEEE and other related standards**
  - **Not a Test Lab**… ICAP strategically aligns with global expert test labs to provide the best level of testing and field evaluation support

## Global Services

- Turnkey Certification Management
- Certified Product Registry
- Trademark & Registry Authority
- Test Suite & Specification Developer
- Benchmarking & Performance Testing Support
- Conformity Program Support
- Self-Validation Suite Development
- Inspection and Verification
- ICAP programs will address marketing, promotion, etc.

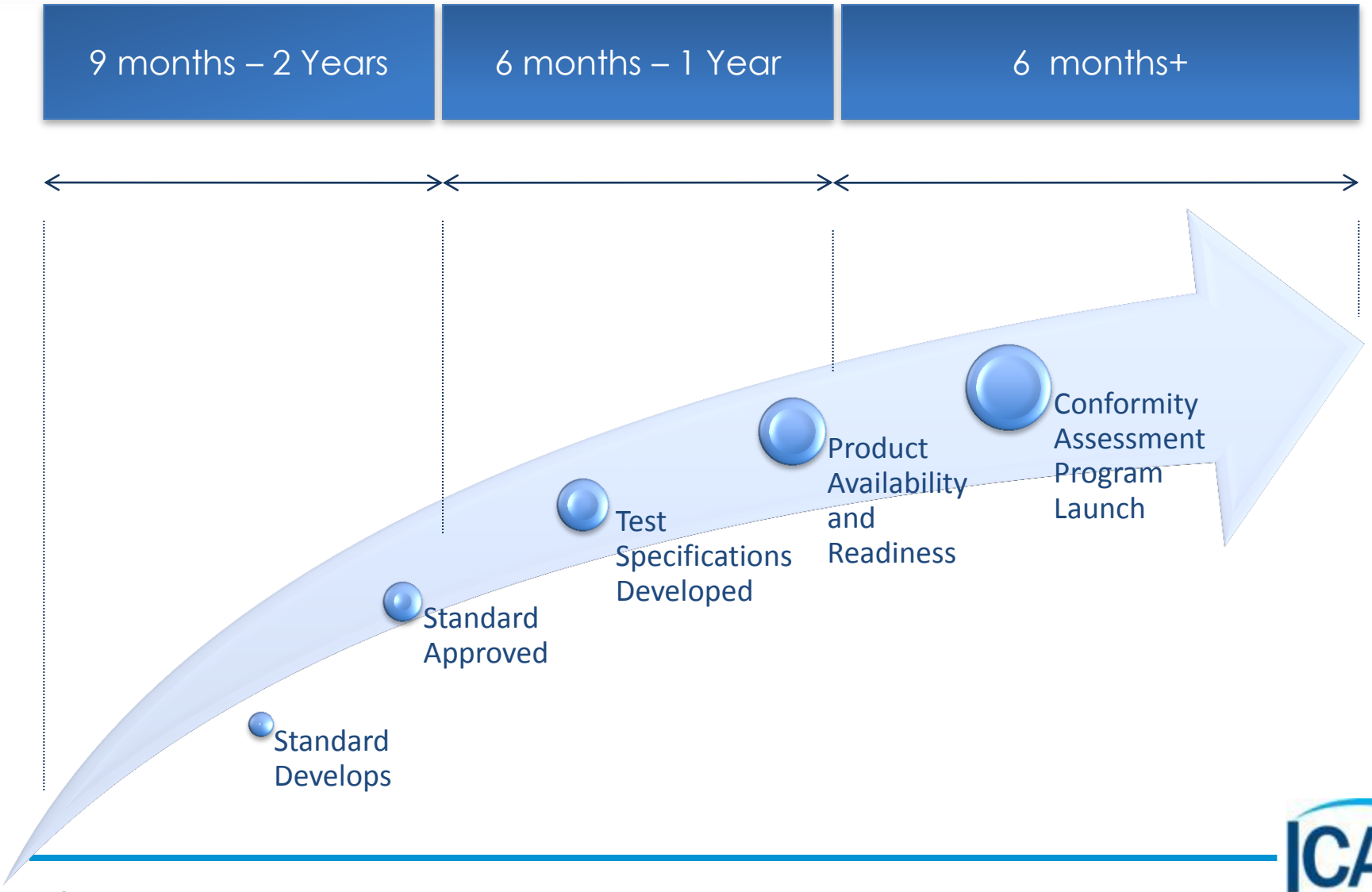

8

# Pillars to a successful program



# Certification Program Development Timeline

## Standard – > Test Specs - > Program Launch

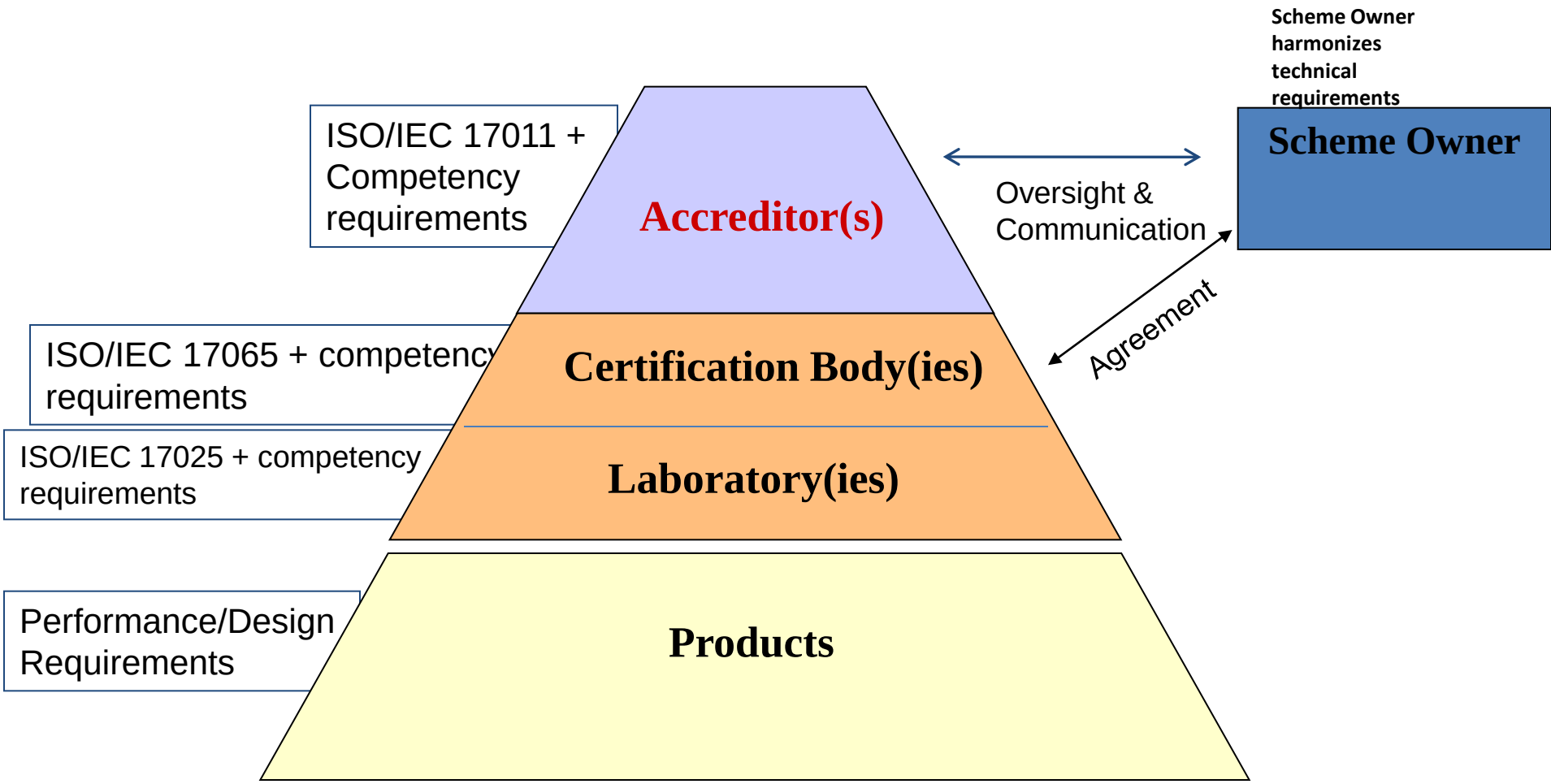


# Benefits of Implementing a Conformity Assessment Program

- Benefits of conformance test before deployment implementation
  - Early identification of non-conformances
  - Exact functionality of the protocol is identified
  - Multi-vendor solutions will have interoperability issues – helps identify such issues
  - New offerings will have bugs – helps to catch them
- Reduces the vendor's cost / need for re-tests for different end-users
- Establishes a baseline for performance expectation
- Eases interoperability
- Transparency based on common implementation / Test Authority


11

# Conformity Assessment Certification Scheme – Single Scheme




Courtesy of G.Gillerman @ NIST

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# Programs Under Active Development

# Programs Under Active Development

- IEEE 1588 Telecom (ITU G8265.1) (Launched)
  - Standard that enables precise synchronization of clocks in measurement and control systems implemented with technologies such as network communication, local computing and distributed objects
- SIEPON (IEEE 1904.1)
  - Service Interoperability in Ethernet Passive Optical Networks (SIEPON)addresses the need for global passive optical network devices to interoperate – plug & play interoperability
  - Target market – passive optical networks, fiber-to-the-home (FTTH)
- Synchrophasor (IEEE C37.118.1)
  - Key components include GPS Satellite synchronized clock, phasor measurement units (PMUs) & phasor data concentrator (PDC)
- IEEE 1588 Power (IEEE C37.238)
  - Standard specifies a common profile for the use of IEEE 1588 Precision Time Protocol (PTP) in power system protection, control, automation, and data communication applications utilizing an Ethernet communications architecture
- Camera Phone Image Quality (CPIQ – IEEE P1858)
  - This standard defines a standardized suite of objectives and subjective test methods for measuring camera phone image quality attributes , and it specifics tools and test methods to facilitate standards-based communication

# IEEE 1588 Telecommunications Certification Program

## Mission

- The IEEE 1588 Conformity Program currently focuses on providing the **telecommunication & power industries** with a timing & sync product certification mark
- The goal is to provide Industry a forum to develop IEEE 1588 certification tests and testing-related profiles
- Market demand will dictate the next vertical in the IEEE 1588 space that ICAP will support

## Model

- **Build program around Standard's applications**
- Driven by Industry as well as several IEEE working group members
- **Industry recognized - Committee of Experts** provides additional level of integrity to test specs, documents and overall certification
- Develop test requirement documents, test case templates, test setup documents
- Formal review processes to ensure highest integrity of test suite
- End goal: Certification, Marking & Marketing of conforming products

## Members

### Participating Members


### Committee of Experts

# SIEPON – IEEE P1904.1

## Mission

- The IEEE SIEPON Working Group currently focuses on developing the standard as well as the test procedure
- The goal is to provide Industry a developed and recognized test that provides SIEPON certification globally
- Market demand will dictate the next set of geographical test labs to conduct tests

## Model

- **Build test around the SIEPON standard**
- Driven by Industry through the IEEE working group and SIEPON CASG
- **SIEPON CASG –** develops certification program and conducts marketing outreach, communication and market awareness
- **Industry recognized – Technical Experts** provide integrity to test spec development, documents and overall certification
- Develop test requirement documents, test case templates, test setup documents
- Formal review processes to ensure highest integrity of test suite
- ICAP Manages testing and certification, functioning both as the certification authority and process auditor to maintain test lab integrity

## Drivers

# Synchrophasor IEEE C37.118

## Mission

- The SCASC currently focuses on developing the test suite specification and the certification program
- The goal is to provide Industry a developed and recognized certification program that provides Synchrophasor certification globally
- Market demand will dictate the next set of geographical test labs to conduct tests

## Model

- **Build test around the Synchrophasor standard**
- Driven by Industry through the IEEE working group
- **Marketing initiatives –** provides marketing outreach, communication and market awareness
- **Industry recognized – Technical Experts** provide integrity to test spec development, documents and overall certification
- Develop test requirement documents, test case templates, test setup documents
- Formal review processes to ensure highest integrity of test suite
- ICAP manages testing and certification, functioning both as the certification authority and process auditor to maintain test lab integrity

## Participants

Symmetricom, FLUKE, M, NIST, Southern California Edison, ABB, Washington State University, SEL, Mehta Tech Inc., ISO new england, RTDS Technologies, doble, OMICRON, Electric Power Group, QUANTA TECHNOLOGY, PG&E, ARBITER SYSTEMS, Enabling Tomorrow's Technology Today

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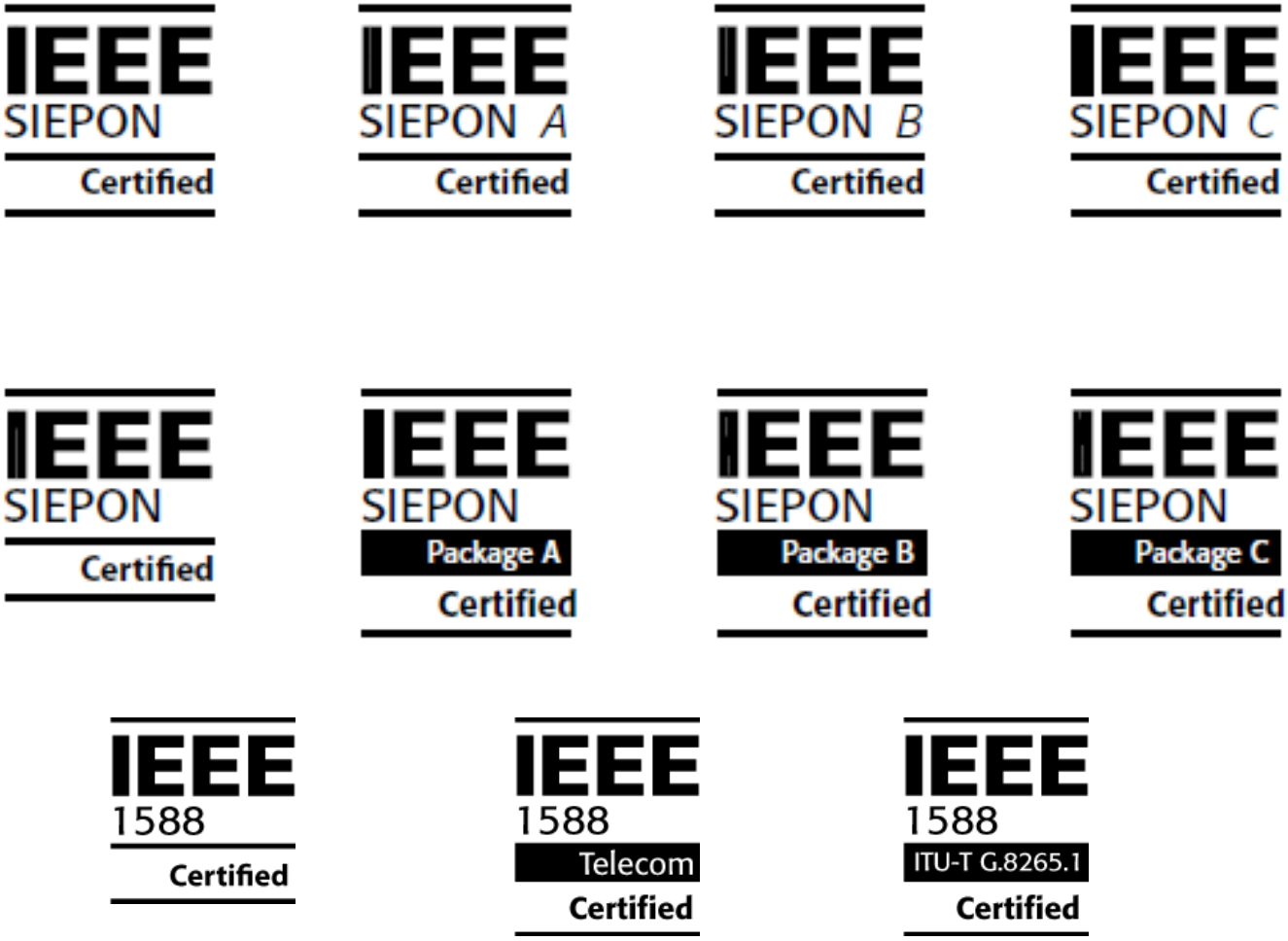
# IEEE Certification Mark

# Certification Mark Defined

- A certification mark is any **word, phrase, symbol or design**, or a combination thereof owned by one party who **certifies the goods and services of others when they meet certain standards.** The **owner of the mark exercises control** over the use of the mark; however, because the sole purpose of a certification mark is to indicate that certain standards have been met, **use of the mark is by others.**

# The IEEE Certification Mark – (draft examples)



# IEEE Certification Mark

- Artwork has been finalized
  - Customizable for individual programs by standard number and/or a short program description, i.e. Telecom, SIEPON, Synchrophasor, etc.
  - Allows to keep maintenance cost of mark at a minimum
- Certification mark is in final stages of trademark process by IEEE Legal

# Thank You