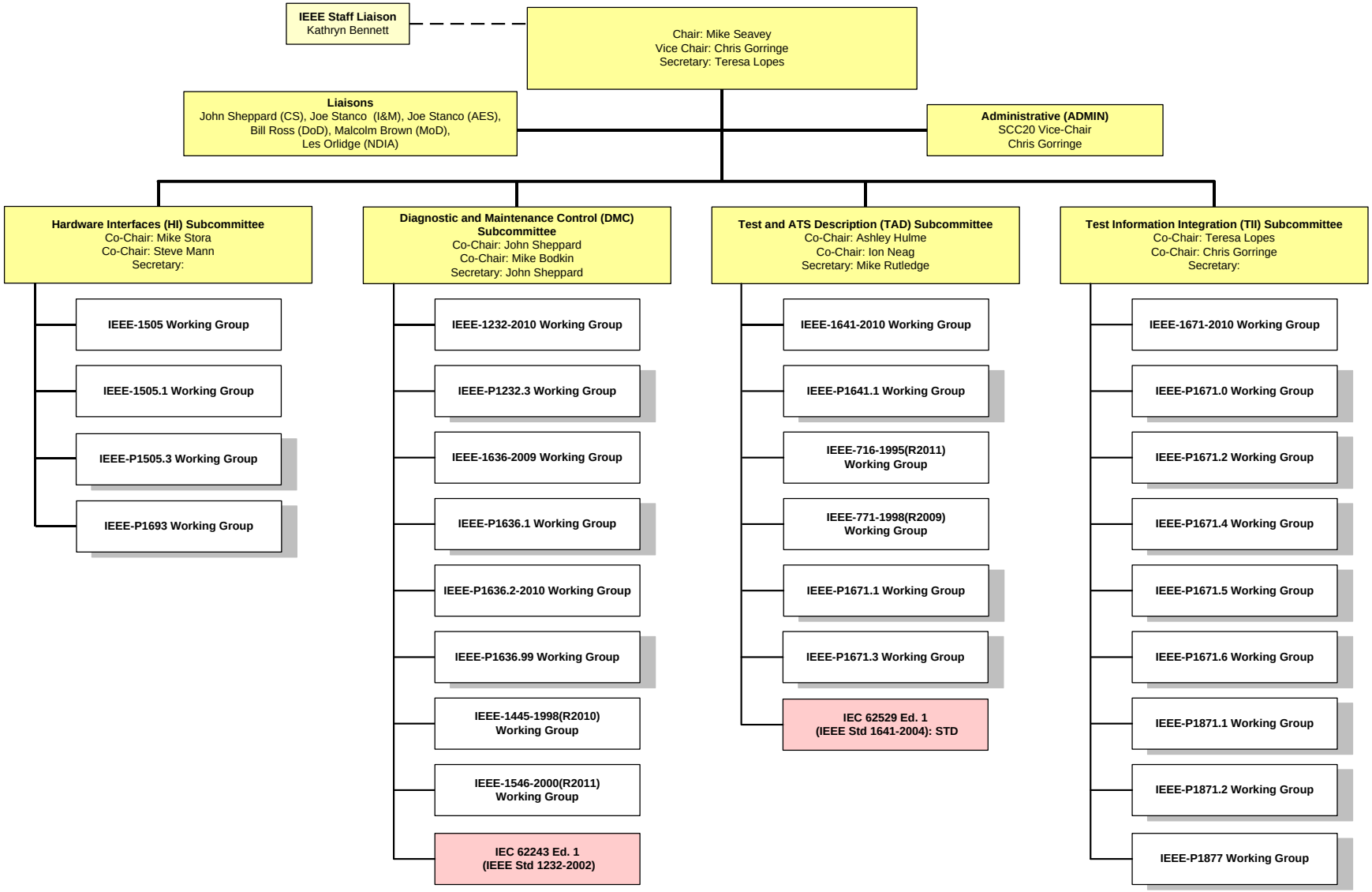
# IEEE SCC-20

Provides for the management, development, and maintenance of language and interface standards supporting system-level (onboard and offboard) automatic test and diagnosis. These standards include (but are not limited to) test requirements, test programs, test procedures, diagnostic knowledge, maintenance information, and major hardware subsystem interfaces between and within Automatic Test Systems.

# SCC-20 Organization - 2012





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# IEEE SCC-20

4 Working Groups:

1. Diagnostic and Maintenance Control
2. Test Information Integration
3. Test Application Development
4. Hardware Interfaces

# Test Information Integration - Automatic Test Markup Language (ATML)

| | |
|---|---|
| 1671 | ATML Overview and Architecture |
| 1671.1 | Test Description |
| 1671.2 | Instrument Description |
| 1671.3 | UUT Description |
| 1671.4 | Test Configuration |
| 1671.5 | Interface Description |
| 1671.6 | Test System Description |

# Diagnostic & Maintenance Control – Information Exchange for Reasoning System Development, Operation, and Maturation

IEEE 1232-2010
Artificial Intelligence Exchange and Tie to All Test Environments (AI-ESTATE)

IEEE 1636-2009
Software Interface for Maintenance Information Collection and Analysis (SIMICA)

IEEE 1636.1-2007
Exchanging Test Results and Session Information via the Extensible Markup Language (XML)

IEEE 1636.2-2010
Exchanging Maintenance Action Information via the Extensible Markup Language (XML).

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# DMC Standards Scope

- **1232 – AI-ESTATE**
- **1.1 Scope**
- The AI-ESTATE standard defines formal specifications for supporting system diagnosis. These specifications support the exchange and processing of diagnostic information and the control of diagnostic processes. Diagnostic processes include, but are not limited to, testability analysis, diagnosability assessment, diagnostic reasoning, maintenance support, and diagnostic maturation.
- **1.2 Purpose**
- The AI-ESTATE standard provides formal models of diagnostic information to ensure unambiguous access to and understanding of the information supporting system test and diagnosis. The standard defines formal information models and software services specific to several different types of diagnostic reasoners. The purpose is to provide semantically sound definitions of diagnostic knowledge and to specify software exchange and service interfaces that are consistent with the state of the practice in modern test and diagnostic systems (e.g., the use of XML and web services).

# DMC Standards

- **1636 - SIMICA**
- **1.1 Scope**
- This trial-use standard is an implementation-independent specification for a software interface to information systems containing data pertinent to the diagnosis and maintenance of complex systems consisting of hardware, software, or any combination thereof. These interfaces will support service definitions for creating application programming interfaces (API) for the access, exchange, and analysis of historical diagnostic and maintenance information. The trial-use standard will use the information models of IEEE Std 1232 as a foundation.

- **1.3 Purpose**
- The purpose of this standard is to specify a software interface for access, exchange, and analysis of product diagnostic and maintenance information. This will address the pervasive need of organizations to assess the effectiveness of diagnostics for complex systems throughout the product life cycle. The use of formal information models will facilitate exchanging historical maintenance information between information systems and analysis tools. The models will facilitate creating open system software architectures for maturing system diagnostics.