IEEE SCC20 25-1 Minutes

JUNE 3-5, 2025 | DE&S DECA SEALAND, UK

Name	Company	Remote	Plenary	SysML	SIMICA	P1671	P1871.3	P2848	P1232	Steering
Alison Kennedy	DE&S - DECA		✓	✓	✓	✓	✓	✓	✓	✓
Charles Godwin		✓		✓	✓	✓				
Chris Gorringe	Spherea UK		✓	✓	✓	✓	✓	✓	✓	✓
Chris Richardson		✓		✓						
Damien Willemet	MBDA France		✓	✓	✓	✓	✓	✓	✓	✓
Dustin Arnold	Global Strategic Solutions	✓		✓	✓	✓				
Dustin Hays	Lockheed Martin	✓		✓						
Evan Peterson	USAF (AFMC/AFSC/76 SWEG)	✓			✓	✓	✓	✓	✓	
Ion Neag	Reston Software		✓	✓	✓	✓	✓	✓	✓	✓
Jack Schuster	Teradyne		✓	✓	✓	✓	✓	✓	✓	✓
Jared Boyden	Lockheed Martin RMS	✓		✓						
Jean-Christophe Hertzog	MBDA France		✓	✓	✓	✓	✓	✓	✓	✓
Jennifer Santulli	IEEE SA	✓	✓	✓	✓	✓	✓	✓	✓	✓
Larry Adams	Self	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mark Dunn	ASI (F-35 JPO)		✓	✓	✓	✓	✓	✓	✓	✓
Martin Pugh	DE&S – DECA		✓	✓	✓	✓	✓	✓	✓	✓
Michal Krawczynski	Spherea UK	✓	✓	✓	✓	✓	✓	✓	✓	
Mike Seavey	Retired		✓	✓	✓	✓	✓	✓	✓	✓
Nathan Tholen	USAF 76 SWEG	✓	✓	✓	✓	✓	✓	✓	✓	✓
Paul Grealis	DE&S – DECA		✓		✓	✓	✓	✓	✓	✓
Phil Hubbard	MBDA UK		✓	✓						
Ron Knight	Collins Aerospace		✓	✓	✓	✓				
Ron Taylor	Summit Test					✓				
Sam Perry	Spherea UK		✓	✓	✓	✓	✓	✓	✓	✓
Scott Stephenson	Lockheed Martin			✓	✓	✓				
Teresa Lopes	Teradyne		✓	✓	✓	✓	✓	✓	✓	✓
Tyler Cannon	USAF (AFMC/AFSC/76 SWEG)		✓	✓	✓	✓	✓	✓	✓	✓
William Oberndorfer	Lockheed Martin			✓	✓					
Yan Rodriguez	Lockheed Martin			✓	✓					

NOTE: Meeting minutes generated with the help of Microsoft Copilot

Rev 2025.08.08

TUESDAY JUNE 3

11:00 AM – 1:00 PM | Plenary | Mike Seavey

See 01 - SCC20 25-1 Meeting Chairs Report.pdf

Call to Order

Meeting called to order at 11:00 AM

Discussion

Phil Hubbard from MBDA has a presentation on Cybersecurity he'd like to share with the group. Will use some time after the SysML discussion is over

ACTION: Send a reminder to working group officers to remind them to take the required IEEE training class

ACTION: Add something to the Policies and Procedures that provides guidance

ACTION: Address Policies and Procedures availability. IEEE would like them to only be posted to IEEE site - remove from SCC20 site? Can we link?

See 02 - June 2025 SCC20 DoD Report.pdf

Clarification on the initiative slides

1. Get ATML for test station and instruments in eCASS
2. Digital transformation – generating CDET from test descriptions, this is still in the research phase

Paul Grealis provided UK MoD Report

Deca embedded in DE&S. DE&S didn't fully appreciate the mechanics of providing support. Focus on eliminating waste. Use of standards is an efficiency will impact UK MoD procurement strategy.

Mike Seavey provided NDIA ATC Update

Nothing to report because committee did not meet

Adjourn

Meeting adjourned at 12:55 PM

Session 1 | Summary | Copilot

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Meeting notes:

- **IEEE Presentation:** Mike Seavey presented a detailed history of the IEEE, including its origins, logos, and significant milestones. He also discussed the committee's history and his involvement since 1987.
    - **IEEE Origins:** Mike Seavey explained that the IEEE was formed from the merger of two groups in 1884 and 1912. He described the IEEE as an American public charity professional organization.
    - **Original Logo:** Mike Seavey discussed the original logo of the IEEE, which included elements like Benjamin Franklin's kite, a Wheatstone bridge, a galvanometer, and Ohm's Law.
    - **Committee History:** Mike Seavey highlighted the history of the committee, noting that it is 59 years old and started in November 1966. He mentioned the creation of a pin for the 50th year and the first logo for the committee.

    - **Personal Involvement:** Mike Seavey shared his personal involvement with the committee, stating that he retired from Northrop Grumman in 2022, attended his first meeting in 1987, and has been the chair since 2008. His term ends at the end of this year.
- **IEEE Membership:** Mike Seavey explained the process of joining the IEEE and the Standards Association, highlighting the importance of membership for participating in ballots and maintaining the roster.
    - **Joining IEEE:** Mike Seavey described the process of joining the IEEE, including the options to join as a professional or student. He mentioned that links to join will be included in the meeting minutes.
    - **Standards Association:** Mike Seavey explained that the Standards Association has a membership similar to societies like the Computer Society, with a fee for membership. He noted that membership is required for participating in ballots.
    - **Individual Membership:** Mike Seavey emphasized that the Standards Committee is an individual-based committee, and members should select the individual membership option when joining the Standards Association.
    - **Maintaining Roster:** Mike Seavey discussed the importance of maintaining the roster, noting that he tracks members and observers, including those who have retired or passed away. He will provide the updated roster to Jennifer.
- **Training Requirements:** Mike Seavey emphasized the importance of completing the required training for standards committees and working group officers, noting that it is a requirement within 90 days of appointment.
    - **Training Class:** Mike Seavey explained that the Standards Association Standard Board requires a training class to be completed by standards committees and working group officers within 90 days of appointment.
    - **Completion Status:** Mike Seavey noted that some working group officers have not completed the training, and he is creating a list of who has and who hasn't. He encouraged everyone to complete the training.
    - **Training Process:** Mike Seavey shared his experience with the training, stating that he completed it in less than 30 days due to his familiarity with similar corporate training.
    - **Policy and Procedure:** Mike Seavey mentioned that the requirement for training is not currently in the policy and procedure, but he expects it to change soon.
- **Policies and Procedures:** Mike Seavey discussed the policies and procedures for the Standards Committee and working groups, including the process of getting them approved and posted on the IEEE SA site.
    - **Approval Process:** Mike Seavey explained the process of getting the policies and procedures approved, including incorporating comments from the Standards Board and IEEE SA.
    - **Validity Period:** Mike Seavey noted that the policies and procedures were approved in February 2023 and are valid until the end of 2028.
    - **Working Group Policies:** Mike Seavey mentioned that working group policies and procedures had to go through the same approval process, and he is working with Jennifer to get them posted on the IEEE SA site.
    - **Posting Requirements:** Mike Seavey stated that the Standards Board prefers the policies and procedures to be posted only on the IEEE SA site.
- **Project Authorization Requests:** Mike Seavey explained the process and importance of Project Authorization Requests (PARs), including their four-year validity and the possibility of extensions.
    - **PAR Definition:** Mike Seavey defined a Project Authorization Request (PAR) as a document that outlines the scope, purpose, and need for a project, which is active for four years.

- **Completion Expectation:** Mike Seavey noted that the Standards Board expects the work to be completed within the four-year timeframe, with the possibility of one or two-year extensions if justified.
- **Extension Process:** Mike Seavey explained that if more than two years of extension are needed, a new PAR should be submitted, which will be given a new number.
- **Schedule Maintenance:** Mike Seavey mentioned that he maintains schedules for active PARs and tracks deadlines for submission.

- **Mandatory Editorial Coordination:** Mike Seavey clarified the mandatory editorial coordination process, which starts the ballot process and ensures the draft standard meets editorial requirements.
  - **MEC Process:** Mike Seavey explained that the mandatory editorial coordination (MEC) process starts the ballot process and is performed by IEEE personnel to check that the draft standard meets editorial requirements.
  - **Duration:** Mike Seavey noted that the MEC process takes 30 days, and all comments received must be addressed.
  - **Technical Content:** Mike Seavey mentioned that technical content can continue to be worked on during the MEC process.
  - **Ballot Constituency:** Mike Seavey explained that the ballot constituency formation, which is also a 30-day process, can be started at the same time as MEC.
- **Standard Suggestions:** Mike Seavey highlighted the process for suggesting changes to documents, emphasizing the need for proposed changes to be in the form of a proposed change of text with supporting comments.
  - **Change Suggestions:** Mike Seavey explained that suggestions for changes in documents should be in the form of a proposed change of text with appropriate supporting comments.
  - **Interpretation:** Mike Seavey mentioned that he is not permitted to provide an interpretation of the text, and if the meaning is unclear, the text likely needs to be changed.
- **Committee Structure:** Mike Seavey outlined the structure of the committee, including the roles of the Executive Commission, working groups, and their reporting lines.
  - **Executive Commission:** Mike Seavey explained that all decisions of the organization are handled by the Executive Commission.
  - **Working Groups:** Mike Seavey mentioned that working groups need to complete their tasks and then hand them to the Standards Committee.
  - **Reporting Lines:** Mike Seavey outlined the reporting lines, stating that he, as chair, reports to the standards and standards innovation, which ultimately reports to the Board of Governors.
  - **Voting Members:** Mike Seavey noted that he is a voting member of the Standards Committee, while the Chair of standards and standards innovation is a non-voting member.
- **IEEE 488.1 and 488.2 Standards:** Mike Seavey discussed the status and challenges of the IEEE 488.1 and 488.2 standards, including their history, current status, and the need for further discussions with the Standards Board.
- **Study Groups:** Mike Seavey and Ion discussed the status and plans for the study groups, including the continuation of the system diagnostic data and services study group and the formation of a new study group for maintenance action information.
- **UK MOD Collaboration:** Paul and Alison discussed the collaboration between the UK MOD and US services on utilizing ATML and sharing data to improve interoperability and transportability.

- **Meeting Plans:** Mike Seavey outlined the plans for future meetings, including the fall meeting at Teradyne and the potential dissolution of the National Defense Industry Association Automatic Test Committee.

Follow-up tasks:

- **Standards Committee Training:** Encourage all working group officers to complete the required training class within 90 days of appointment. (MikeSeavey)
- **Website Update:** Work with Jennifer to get the working group policies and procedures posted on the IEEE Standards Association site. (MikeSeavey, Jennifer)
- **Project Extension:** Draft and submit the extension request for the 2848 project to the steering committee for approval. (MikeSeavey, John Shepard)
- **Roster Update:** Resolve the current roster by identifying members who have retired, passed away, or taken the DoD package, and provide the updated roster to Jennifer. (MikeSeavey)
- **Meeting Scheduling:** Propose to the steering committee to hold the fall meeting at Teradyne in the first or second week of October. (MikeSeavey)
- **Study Group Continuation:** Formally create a new study group to continue addressing the open issues related to the use of non-G standards and adoption of SYSML 2.0. (Jan)

2:00 PM – 5:00 PM | SysML Study Group | Ion Neag

See 03 - SysML Test Requirements Study Group - 2025.06.pdf

Call to Order

Meeting called to order at 2:01 PM

Discussion

Review of use cases

Feedback from Damien and Jean-Christophe

Adjourn

Meeting adjourned at 3:50 PM

4:00 PM – 5:00 PM | Cyber Presentation | Phil Hubbard

See 04 - TE Cyber - SCC20 - June 25.pdf

Call to Order

Meeting called to order at 4:01 PM

Discussion

The Ministry of Defense is adopting a secure by design methodology utilizing a risk-managed framework.

UK Sec Def, France DGA and US DoD all using equivalent standards

Clear and honest communication is key. Communication needs to be founded in consistent language and structure.

The standards committee is the best place to propose and implement new practices, standards and protocols.

Not trying to share data but want to share process and structure.

Adjourn

Meeting adjourned at 3:50 PM

Session 2 | Summary | Copilot

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Meeting notes:

- **Study Group Overview:** Ion provided an overview of the study group, its formation, and its objectives, including the need for further standardization of test information in SysML design data.
    - **Formation and Objectives:** Ion explained that the study group was formed following a request from several members of SCC 20, including himself, Eric Gold from DSI, Chris Gorringe from Spherea, and Raymond Beshears from Raytheon. The group aims to determine if a new standard is needed for test information in SysML design data, and if so, to develop a project authorization request for creating the new standard.
    - **Need for Standardization:** Ion highlighted the need for further standardization of test information in SysML design data, which arose from various integration projects. The goal is to ensure that test information is consistently represented and can be easily integrated into diagnostic and test engineering tools.
    - **Study Group Activities:** The study group has been meeting for six months, with two full meetings and several virtual meetings. The group's work concluded at the August meeting last year, but it was recommended to continue studying open issues, such as the relationship to UML testing profile and the new SysML 2.0 specification.
- **Evaluation Criteria:** Ion discussed the criteria for evaluating a project proposal, including potential market acceptance, technical feasibility, relationship to related standards, manpower, and realistic scope.
    - **Market Acceptance:** Ion emphasized the importance of evaluating the potential market acceptance of a new standard. This involves assessing whether there is a demand for the standard and if it will be adopted by the industry.
    - **Technical Feasibility:** Technical feasibility is a critical criterion, as it determines whether the proposed standard can be practically implemented. This includes evaluating the technical challenges and the resources required to develop the standard.
    - **Related Standards:** Ion mentioned the need to consider the relationship to related standards. The IEEE and other standardization bodies prefer not to create new standards if similar ones already exist. The study group must ensure that the new standard does not duplicate existing standards.
    - **Manpower and Scope:** Evaluating the available manpower and the realistic scope of the project is essential. The study group needs to ensure that there are enough qualified individuals to work on the project and that the scope of the standard is achievable within the available resources.
- **Action Items Review:** Ion reviewed the action items from the last meeting, including the need for input from participants and the status of data release from Lockheed Martin.
    - **Participant Input:** Ion requested input from participants for the current meeting, noting that no new presentations were received in advance. He encouraged participants to present any relevant information during the meeting.
    - **Lockheed Martin Data:** Ion mentioned that Lockheed Martin had not yet released the data they were working on. He had an email exchange with Scott from Lockheed Martin, who indicated that they were still working on the data release. This data is important for the study group's work.

- **Use Cases for Test Data:** Ion identified three use cases for test data, including taking product design data from SYSML and converting it into diagnostic engineering tools, supporting TPS acquisition, and generating an initial design of a test station configuration.
    - **Diagnostic Engineering Tools:** Ion described the first use case, which involves taking product design data from SYSML and converting it into diagnostic engineering tools. This process includes importing topological design data, parts, ports, connectors, and states into diagnostic models for testability analysis and strategy optimization.
    - **TPS Acquisition:** The second use case focuses on supporting TPS acquisition. This involves deriving test requirements from SysML models, refining the list of tests through testability analysis, and verifying AT compatibility. The goal is to generate an initial test design and signal requirements for TPS development.
    - **Test Station Configuration:** The third use case involves generating an initial design of a test station configuration. By aggregating test requirements from multiple units, the study group aims to design a test station that can accommodate the testing needs of various units. This includes assessing signal requirements and AT capabilities.
- **SysML Version Considerations:** Ion discussed the different versions of SysML, including the new proposed 2.0 version, and the recommendation to target version 1.6 or 1.7 for the time being.
    - **SysML Versions:** Ion explained that SYSML 1.6 is widely used and considered stable, while SYSML 1.7 is the latest version with some improvements. However, SYSML 2.0 is a significant departure from previous versions, breaking compatibility with UML and introducing a text-based description format.
    - **Recommendation:** The study group recommended targeting SYSML version 1.6 or 1.7 for the time being, as these versions are more stable and widely supported. The group will continue to monitor the development of SYSML 2.0 and assess its suitability for future projects.
- **Related Standards:** Ion listed related standards that the study group has to identify, including ATML, UML testing profile, and OMG risk analysis and assessment modeling language.
    - **ATML:** Ion mentioned ATML (Automatic Test Markup Language) as a related standard that the study group needs to consider. ATML provides a framework for describing test information and is relevant to the group's work on standardizing test data in SYSML.
    - **UML Testing Profile:** The UML testing profile is another related standard that the study group needs to evaluate. This profile provides a standardized way to describe testing processes and is used in software-intensive systems. The group will assess its applicability to hardware-intensive systems.
    - **OMG Risk Analysis:** Ion also mentioned the OMG risk analysis and assessment modeling language as a related standard. This language provides a framework for modeling reliability and testability analysis, which is relevant to the group's work on integrating test data from SYSML models.
- **Secure by Design Framework:** Phil introduced the Secure by Design framework, emphasizing the need for a risk-managed approach to security and the importance of continuous monitoring and assurance throughout the lifecycle.
    - **Risk-Managed Approach:** Phil explained that the Secure by Design framework adopts a risk-managed approach to security, similar to safety-related frameworks. This involves identifying and mitigating risks to an acceptable level throughout the lifecycle of a system.
    - **Continuous Monitoring:** Continuous monitoring and assurance are key components of the Secure by Design framework. Phil emphasized the need for periodic security assessments and the ability to quickly reevaluate risks as new threats emerge. The goal is to ensure that security measures remain effective over time.

    - **Lifecycle Assurance:** The framework requires security assurance throughout the entire lifecycle of a system, from design and development to deployment and maintenance. This includes regular security demonstrations and the ability to track and manage security risks continuously.

- **NIST 800 Series Framework:** Phil explained the use of the NIST 800 Series framework for cybersecurity assessments and the need for standardization in the criteria and structure of threat events.
    - **NIST 800 Framework:** Phil described the NIST 800 Series framework as a risk management framework used for cybersecurity assessments. The framework is configurable and involves taking organizational information and policy inputs to conduct risk assessments.
    - **Standardization Need:** Phil highlighted the need for standardization in the criteria and structure of threat events within the NIST 800 framework. This standardization is essential for ensuring that cybersecurity assessments are consistent and that the information can be effectively communicated and shared among stakeholders.
    - **Challenges:** Phil mentioned the challenges of applying the NIST 800 framework to test equipment, as existing criteria and information are often not relevant. He emphasized the need to develop specific criteria and threat events for test equipment to ensure accurate and meaningful assessments.
- **Call for Support:** Phil called for support in developing a standardized structure for cybersecurity assessments, highlighting the urgency and the need for collaboration among stakeholders.

Follow-up tasks:

- **Follow-up with Lockheed Martin:** Continue checking with Lockheed Martin to see if their work with the UML testing profile can be shared. (Ion)
- **Integrators and System Data:** Approach integrators and system integrators with questions on what to expect to find in the models, the level of maturity, and the processes of integrating sysml data with lower-level design. (Ion)
- **Capella Presentation:** Reach out to colleagues who have experience with Capella to see if they want to make a presentation on their approach and findings. (Ion)
- **Prototyping with Models:** Find a suitable sysml model for prototyping and try to play with it to understand its capabilities. (Ion)
- **Tool Evaluation for Prototyping:** Evaluate open-source tools like Altova UML for their suitability in prototyping sysml models. (Ion)
- **Secure by Design Framework:** Develop a checklist and framework criteria for secure by design to ensure all stakeholders fit into the secure by design pattern. (Phil)
- **Cybersecurity Threat Events:** Create a structured model for deriving standard threat events and share it as a starting point for assessments. (Phil)

WEDNESDAY JUNE 4

11:00 AM – 1:00 PM | SIMICA Study Group | Mike Seavey

See 05 - P1636 Study Group 25-1 Meeting.pdf

Call to Order

Meeting called to order at 11:00 AM

Discussion

No PAR to make modifications

Issue identified with SIMICA common during the P2848 work. Content of one of the complex types was lost

Session 1 | Summary | Copilot

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Meeting notes:

- **Introduction of Participants:** Mike Seavey facilitated the introduction of participants, including Dustin Arnold from Global Strategic Solutions, Evan Peterson from the United States Air Force, Jennifer Santulli from IEEE-SA, Michal from Spherea, Larry Adams representing his own interest, and Nathan Tholen from the United States Air Force's software directorate.
- **Agenda Overview:** Mike Seavey presented the agenda for the day, which included a study group discussion on Simica to 1636 file one and 1636.2 in the morning, and a large agenda dealing with the ATML revision in the afternoon.
    - **Morning Session:** Mike Seavey outlined the morning session agenda, focusing on the study group discussion about Simica to 1636 file one and 1636.2. This session aimed to address the software interface for maintenance information analysis, including test results and maintenance action information.
    - **Afternoon Session:** The afternoon session was dedicated to a large agenda dealing with the ATML revision. This included discussions on the ATML test or UUT description, Simica's test results, and Simica's MAI, with Dustin Arnold providing input on gaps in the schemas.
- **Essential Patent Claims:** Mike Seavey informed participants about the importance of disclosing any essential patent claims to the IEEE so that they can be addressed by the patent committee.
- **1636 Study Group:** Mike Seavey discussed the 1636 study group, which deals with the software interface for maintenance information analysis, including test results and maintenance action information. Dustin Arnold mentioned gaps in the schemas that limit their ability to capture data, and Mike Seavey clarified that comments and suggested changes can be provided at any time.
    - **Study Group Purpose:** Mike Seavey explained that the 1636 study group focuses on the software interface for maintenance information analysis, including test results and maintenance action information. The base document describes common elements included in schemas defined in 1636.1 and 1636.2.
    - **Schema Gaps:** Dustin Arnold highlighted gaps in the schemas that limit their ability to capture data, specifically mentioning the ATML test or UUT description, Simica's test results, and Simica's MAI. He noted that changes are not currently being accepted for 1636.1 and 1636.2.

- **Comment Submission:** Mike Seavey clarified that comments and suggested changes can be provided at any time, even if there is no active PAR to revise the standards. He encouraged participants to submit their input for future consideration.

- **Presentation Preparation:** Dustin Arnold clarified that he did not prepare a presentation for the morning session due to a misunderstanding about the acceptance of changes for 1636.1 and 1636.2. He agreed to present his changes at the next meeting in October.
  - **Misunderstanding:** Dustin Arnold explained that he did not prepare a presentation for the morning session because he misunderstood that changes for 1636.1 and 1636.2 were not being accepted. He interpreted an email from Mike Seavey as indicating that changes would not be discussed at the working level meeting.
  - **Future Presentation:** Mike Seavey clarified the misunderstanding and asked Dustin Arnold to present his changes at the next meeting in October. Dustin agreed to prepare and present his changes at that time.
- **Schema Issues:** Chris Gorringe and Mike Seavey discussed issues with the schemas, including missing elements and the need for non-breaking changes. They proposed solutions to address these issues and ensure compatibility with existing standards.
  - **Schema Problems:** Chris Gorringe and Mike Seavey identified issues with the schemas, such as missing elements and changes that caused compatibility problems. They traced the history of these issues and found that certain elements had been moved or renamed, leading to discrepancies.
  - **Non-Breaking Changes:** They proposed solutions to address these issues, including defining a maintenance action extension that would not require changing the namespace. This approach ensures compatibility with existing standards while fixing the identified problems.
  - **Example Verification:** Chris Gorringe emphasized the importance of verifying examples against the updated schemas to ensure they work correctly. They updated old examples to use the new schema elements and verified their functionality.
- **2848 Standard:** Chris Gorringe and Mike Seavey discussed the 2848 standard, its interface with MAI, and the need for corrections to ensure it works correctly. They considered options for addressing these issues, including writing a PAR and combining standards.
  - **Standard Interface:** Chris Gorringe and Mike Seavey discussed the interface of the 2848 standard with MAI, identifying issues with the schemas that need correction to ensure proper functionality.
  - **Correction Options:** They considered various options for addressing these issues, including writing a PAR to formally request changes and combining standards to reduce duplication and streamline processes.
  - **Publication Challenges:** They discussed the challenges of publishing corrections to the 2848 standard, noting that it is already six years old and the PAR expires at the end of the year. They emphasized the need to address these issues promptly to avoid further delays.
- **Prognostic Models:** Chris Gorringe and Mike Seavey discussed the inclusion of prognostic models in the 2848 standard, which involves tracking instrument degradation over time and using the data for maintenance actions.
  - **Model Inclusion:** Chris Gorringe and Mike Seavey discussed the inclusion of prognostic models in the 2848 standard. These models track instrument degradation over time and use the data to predict future failures and inform maintenance actions.
  - **Data Collection:** They explained the process of collecting data from self-test and calibration procedures, which is then used by diagnostic algorithms to produce prognostic results. This data helps in maintaining the AP and planning maintenance actions.

    - **Example Creation:** They created examples to demonstrate the use of prognostic models, including detailed diagrams that show the flow of data and the cross-references between different elements. These examples help in understanding how the models work and their practical application.

- **Examples and Cross-References:** Chris Gorringe and Mike Seavey emphasized the importance of creating coordinated examples and cross-references to ensure the standards are clear and usable. They proposed publishing these examples and diagrams to support the standards.
    - **Coordinated Examples:** Chris Gorringe and Mike Seavey stressed the importance of creating coordinated examples that demonstrate the practical application of the standards. These examples help in understanding the standards and ensuring they are clear and usable.
    - **Cross-Reference Diagrams:** They proposed creating detailed diagrams that show the cross-references between different elements in the standards. These diagrams help in visualizing the relationships and ensuring the standards are correctly implemented.
    - **Publication Plan:** They discussed the plan to publish these examples and diagrams as part of the standard documentation. This approach ensures that users have access to practical examples and can understand how to apply the standards effectively.
- **Test Results and Indictments:** Nathan Tholen and Mike Seavey discussed the use of test results and indictments in the 1636.1 standard, including the need for clear references and the importance of logging information for both operators and applications.
- **XML vs. JSON:** Nathan Tholen and Mike Seavey discussed the preference for using XML over JSON for the standard, considering the constraints and requirements of the environment in which the standard will be used.
- **Meeting Conclusion:** Mike Seavey concluded the meeting, noting that the study group will be on the October meeting agenda and encouraging participants to provide input and comments.

Follow-up tasks:

- **Presentation Preparation:** Prepare and present the changes needed for 1636.1 and 1636.2 at the October meeting. (Dustin)
- **ATML Revisions:** Address the information provided on UT description during the ATML revisions discussion in the afternoon session. (MikeSeavey, Dustin)
- **Schema Gaps:** Submit the identified gaps in the schemas for 1636.1 and 1636.2 when changes are being accepted. (Dustin)
- **Standard Document Update:** Verify if the standard document needs to be changed to reflect the updated schema. (MikeSeavey, Ion)
- **Combined Document Feedback:** Provide feedback on whether the family of standards should be combined into one document. (Team)
- **Examples Verification:** Double-check the examples to ensure they match the updated schema and work correctly. (MikeSeavey, Ion)
- **Study Group Comments:** Collect and review comments from the study group to address potential issues with existing standards. (MikeSeavey, Team)
- **October Meeting Agenda:** Include the study group on the October meeting agenda and ensure participation from key members. (MikeSeavey)

Adjourn

Meeting adjourned at 1:00 PM

2:00 PM – 5:00 PM | P1671 Working Group | Mike Seavey

See 06 - P1671 WG 25-1 Meeting.pdf

See 07 - 1671.3 Proposed Changes.pdf

See 08 - Discussion of ATML Change Requests - SCC20 2025-01.pdf

Call to Order

Meeting called to order at 2:14 PM

Adjourn

Meeting adjourned at 5:00 PM

Session 2 | Summary | Copilot

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Meeting notes:

- **Introductions:** Chris initiated the meeting with introductions, including participants from various organizations such as GSS, United States Air Force, IEEE, and Lockheed Martin.
- **Operation Disconnect:** Tyler Cannon from the Air Force proposed adding an operation disconnect to the test description, which would disconnect all connected signals at the end of a test or test group.
    - **Proposal:** Tyler Cannon proposed adding an operation disconnect to the test description. This operation would disconnect all connected signals at the end of a test or test group, similar to the existing operation reset all.
    - **Discussion:** The discussion included the scope of the operation, which would disconnect all present connected signals. The operation would be similar to reset all but would focus on disconnecting signals.
    - **Implementation:** Chris and Nathan discussed the technical implementation of the operation disconnect. They considered how it would interact with existing operations and the state of signals and instruments.
- **Operation Return:** Nathan proposed an operation return to simplify control flow in tests, allowing for early exit and return to the test group caller.
    - **Proposal:** Nathan proposed an operation return to simplify control flow in tests. This operation would allow for an early exit from a test and return to the test group caller, similar to a return statement in programming.
    - **Use Case:** Nathan explained that the operation return would be useful for handling unusual cases at the beginning of a test, avoiding the need for nested if statements.
    - **Implementation:** The operation return would be part of the control flow operations, similar to repeat and conditional. It would manage the flow of operations within a test.
- **Error Reporting:** Dustin Arnold from GSS discussed the need for more detailed error reporting, including the specific meaning of individual bit codes.

  - **Proposal:** Dustin Arnold proposed changing the annotation of the source element in error reporting to include the specific meaning of individual bit codes. This would provide more detailed information about errors.
  - **Discussion:** The discussion included how to represent bit codes and their descriptions within the existing schema. Chris explained that the ID field could be used for bit codes, and the description field could provide the meaning of those codes.
- **Faults and Failures:** Chris explained how faults and failures can be mapped to errors, providing a detailed description of how to use the existing schema to achieve this.
  - **Mapping:** Chris explained that faults and failures can be mapped to errors using the existing schema. Each fault or failure can be associated with specific error IDs, providing a clear link between the two.
  - **Implementation:** Chris provided a detailed description of how to use the existing schema to map faults and failures to errors. This includes using the error element to describe individual bit messages and linking them to faults and failures.
- **Component Interface:** Ron Taylor proposed adding an interface element to the component schema, but it was determined that the existing structure already supports this through inheritance.
  - **Proposal:** Ron Taylor proposed adding an interface element to the component schema to make it cleaner and more explicit.
  - **Discussion:** Chris and Nathan discussed that the existing structure already supports this through inheritance. Adding an interface element would complicate the schema and potentially break existing implementations.
- **Physical Properties:** Ron Taylor suggested adding physical properties to the network list, but it was found that the existing intrinsic path schema already supports this.
  - **Proposal:** Ron Taylor suggested adding physical properties to the network list to provide more detailed information about wiring, such as wire gauge and diameter.
  - **Discussion:** Chris and Nathan explained that the existing intrinsic path schema already supports this through the wire path element, which includes various physical properties related to wiring.
- **Operator Messages:** Ron Taylor proposed adding an operator message element to the detailed test information, but it was determined that the existing operation message in and out already serve this purpose.
  - **Proposal:** Ron Taylor proposed adding an operator message element to the detailed test information to standardize operator messages within tests.
  - **Discussion:** Chris and Nathan explained that the existing operation message in and out already serve this purpose. These operations allow for operator messages to be tied to specific tests and provide a more structured approach.
- **Next Steps:** Chris proposed scheduling another virtual meeting to continue discussing the remaining change proposals and allocate more time for face-to-face meetings.
  - **Virtual Meeting:** Chris proposed scheduling another virtual meeting to continue discussing the remaining change proposals. This would ensure that all proposals are thoroughly reviewed and addressed.
  - **Face-to-Face:** Chris suggested allocating more time for face-to-face meetings in the future to facilitate more in-depth discussions and collaboration.

Follow-up tasks:

- **Operation Disconnect:** Create and circulate the descriptions for the new operation disconnect and review the descriptions for reset all and disconnect all operations. (Nathan, Chris)
- **Session Action Operation:** Refine the internal proposal for the session action operation, making it more generic and considering the comments discussed, and present it at the next meeting. (Nathan)
- **Review 1871.2 Standard:** Review the 1871.2 standard to determine if it includes the necessary physical properties for wiring, such as wire gauge and diameter, and report back with findings. (Ron Taylor)
- **Post Meeting Document:** Post the meeting document with the discussed changes and color-coded sections to differentiate between discussed and pending items. (Chris)

THURSDAY JUNE 5

11:00 AM – 11:30 AM | P1871.3 Status | Mike Seavey

See 09 - P1871.3 Status 25-1 Meeting.pdf

Call to Order

Meeting called to order at 9:00 AM

Discussion

Not a working group meeting. Only providing status.

On the Steering agenda to approve a withdrawing the PAR

Adjourn

Meeting adjourned at 9:05 AM

11:00 AM – 12:00 PM | P1671 Working Group | Mike Seavey

See 06 - P1671 WG 25-1 Meeting.pdf

Review of draft

Single document. All dot standards are now clauses. Schemas from dot standards are in annexes. Only need to pull in the high-level description and the schemas from the dot standards, everything else is already in the base document

Create a consistent example that covers all the standards including .4 (Test Configuration)

New informative annex for JSON

Discussion

Ion – documentation that gets exported from XmlSpy has the datatypes hyperlinked and today because they are independent types links across schemas don't work. If we export as a whole, do we now get cross-schema hyperlinks

Mike to send out annex to folks to review [Ion, Chris, Teresa, Alison, Ron Knight]

Adjourn at 9:22 AM

11:30 AM – 12:30 PM | P2848 Status | Mike Seavey

See 10 - P2848 Status 25-1 Meeting.pdf

Call to Order

Meeting called to order at 11:22 AM

Discussion

Need PAR Extension to finish document

Adjourn

Meeting adjourned at 11:25 AM

12:30 PM – 1:00 PM | P1232 Status | Mike Seavey

See 11 - P1232 Status 25-1 Meeting.pdf

Call to Order

Meeting called to order at 11:26 AM

Discussion

New title: System Diagnostic Data and Services

Information models in old standard where done using Express-G (ISO standard). No longer a standard. Have created a new standard that is an XML representation of the schemas and data. There's a company in Norway that has a tool that can still generate Express models

Concern about continued use of Express models – only standard that uses it, tooling

Migrating to Xml will non-trivial. Express allows you describe both structure and constraints. Not all constraints can be expressed in Xml, those would have to go in the standard

Adjourn

Meeting adjourned at 11:44 AM

12:00 PM – 1:00 PM | P1671 Working Group | Mike Seavey

Continuation of 1671 proposed changes

See 08 - Discussion of ATML Change Requests - SCC20 2025-01.pdf

Session 1 | Summary | Copilot

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Meeting notes:

- **Agenda Review:** Mike Seavey reviewed the agenda for the meeting and proposed changes to the schedule to accommodate the review of document 1671.3 and P 2848, with any remaining time dedicated to change proposals between Chris and Ion.
- **Document 1671.3 Status:** Mike Seavey provided an update on the status of document 1671.3, including its scope, references, and the creation of a draft annex for revision. He mentioned that the par for the recommended practice will be withdrawn and this will be discussed in the steering committee meeting.
- **Document 1671 Draft 2:** Mike Seavey discussed the changes made to the 1671 draft 2 document, including grammar and spelling corrections, updates to references and bibliography entries, and the removal of references to the Atml family of standards. He also mentioned the process of updating figures and the inclusion of XML schemas in annexes.
- **Annex Q Review:** Mike Seavey presented the draft of Annex Q and offered to send it to interested members for review and comments before sending it to Anna for further updates.
- **Document 2848 Extension:** Mike Seavey discussed the need for a one-year extension for document 2848, which is currently operating under a two-year extension. He mentioned that the par for the extension will be discussed in the June 12th meeting and will then be addressed in a steering meeting.
- **Document 1232 Update:** Mike Seavey provided an update on document 1232, including the title change, the agreement with IEC, and the scope change. He mentioned the work being done by John and his

graduate students at Montana State University to address the express model definition and the potential move to an XML schema.

- **Instrument Description Hierarchy:** Ion and Chris discussed the need for a hierarchy in instrument descriptions, where test station descriptions can overwrite instrument descriptions, and ITA descriptions can overwrite test station descriptions. They also mentioned the need for unique instance names and resources when multiple instruments of the same model exist.
- **Operation Read Variable:** Ion and Chris discussed the operation read variable and the need to normalize data flows. They concluded that the current operations support the required data flows and there is no need for additional operations.
- **Nominal Value Usage:** Ion and Nathan discussed the usage of nominal values in test descriptions and the importance of not using nominal values as default values for test results. They agreed that nominal values should be used for simulation purposes and not for initial values in deployable code.
- **Virtual Meeting Proposal:** Ion proposed continuing the working group meeting virtually to keep the pace and suggested scheduling two half-day sessions to address the remaining topics.

Follow-up tasks:

- **Review of Annex Q:** Send Annex Q to interested members for review and comments. (MikeSeavey)
- **Draft PAR for 2848:** Present the draft PAR for 2848 at the June 12th meeting for approval. (MikeSeavey)
- **Review of Draft Document:** Review the draft document created by MikeSeavey and provide feedback. (Ron)
- **Extension PAR for 2848:** Draft a second extension PAR for 2848 and discuss it at the June 12th meeting. (MikeSeavey)
- **Review of Annex Q:** Review and update the material in Annex Q before sending it to Anna. (MikeSeavey)
- **Review of Draft Document:** Review the draft document created by MikeSeavey and provide feedback. (Chris)
- **Review of Draft Document:** Review the draft document created by MikeSeavey and provide feedback. (Theresa)
- **Review of Draft Document:** Review the draft document created by MikeSeavey and provide feedback. (Anna)
- **Review of Draft Document:** Review the draft document created by MikeSeavey and provide feedback. (Jennifer)

2:00 PM – 3:00 PM | Executive Committee | Mike Seavey

Call to Order

Meeting called to order at 2:00 PM

5 of 8 present

Officers	
Chair	Mike Seavey (MLSeavey@outlook.com)
Vice Chair	Chris Gorringe (Chris.Gorringe@Spherea.co.uk)
Secretary / Treasurer	Teresa Lopes (teresa.lopes@teradyne.com)
DoD	Mike Malesich (michael.a.malesich.civ@us.navy.mil)
MoD	Paul Grealis (paul.grealis100@mod.gov.uk) Alternate: Alison Kennedy (alison.kennedy414@mod.gov.uk)
Consultant	Ion Neag (ion.neag@restonsoftware.com)
Consultant	John Sheppard (john.sheppard@cs.montana.edu)
IEEE P1671 Standard for Automatic Test Markup Language (ATML) for Exchanging Automatic Test Equipment and Test Information via eXtensible Markup Language	Mike Seavey (michael.seavey@ngc.com)
IEEE P1871.3 Recommended Practice for Using JavaScript Object Notation (JSON) with XML-based Data Models for Test and Diagnosis for Electronic Systems	Anand Jain (anand.jain@ni.com)
IEEE P2848 Prognostics and Health Management for ATS	John Sheppard (john.sheppard@cs.montana.edu)
IEEE-1232 System Diagnostic Data and Services (Revision of IEEE 1232-2010 AI-ESTATE)	John Sheppard (john.sheppard@cs.montana.edu)
ATML-compatible representation in SysML of test requirements information for electronic systems – continuation	Ion Neag (ion.neag@restonsoftware.com)

Discussion

Ion motioned to accept the minutes as posted. Seconded by Chris. Passed unanimously

Both study groups continue on to next meeting

PAR to withdraw 1871.3, text will be integrated into the 1671 spec – see P1871.3_PAR.pdf

Alison motioned to accept the withdrawal of 1871.3 PAR. Seconded by Chris with clarification. Passed unanimously

Ion moves to approve the PAR as written. Seconded by Teresa. No discussion. Passed unanimously

Fall meeting (needs to end before October 20)

Chris moves to host the meeting week of 10/6 at Teradyne's facility. Seconded by Alison. No discussion. Passes unanimously.

Adjourn

Meeting adjourned at 2:20 PM

Session 2 | Summary | Copilot

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Meeting notes:

- **Volunteer Training:** Mike Seavey discussed the importance of volunteer training for chairs, vice chairs, and secretaries of committees or working groups. They mentioned that Jennifer Nolan can assist with any questions.
    - **Training Requirement:** Mike Seavey emphasized that all chairs, vice chairs, and secretaries of committees or working groups must attend a training class. This requirement is crucial for ensuring that all leaders are well-prepared for their roles.
    - **Assistance Available:** Mike Seavey mentioned that if there are any questions regarding the training, both he and Jennifer Nolan are available to provide assistance and support.
- **Meeting Minutes Approval:** Mike Seavey addressed the meeting minutes of the 24-2 meetings, which were posted late. The motion to approve the minutes as posted was passed without any discussion.
    - **Minutes Posted Late:** Mike Seavey acknowledged that the meeting minutes for the 24-2 meetings were posted late and apologized for the delay. He invited any comments or corrections from the attendees.
    - **Approval Motion:** A motion was made to approve the minutes as posted. The motion was seconded, and with no discussion or objections, the motion passed.
- **Study Groups Update:** Mike Seavey noted that the two study groups that held meetings did not develop a PAR, so there is no vote on the PAR coming out of the study. The study needs will carry forward to the next meeting later this year.
    - **Study Groups' Progress:** Mike Seavey reported that the two study groups that held meetings did not develop a PAR. Consequently, there will be no vote on the PAR at this time.
    - **Future Plans:** The study needs identified by the groups will be carried forward to the next meeting scheduled for later this year, where further actions will be considered.
- **Withdrawal of 1871.3:** Mike Seavey discussed the withdrawal of 1871.3 and mentioned that the committee decided to include the maturity and revision of 1671-2010. The motion to withdraw the PAR was passed without opposition.
    - **Withdrawal Explanation:** Mike Seavey explained that the committee decided to withdraw 1871.3 and include the maturity and revision of 1671-2010. This decision was made to streamline the process and ensure consistency.
    - **Motion to Withdraw:** A motion was made to withdraw the PAR for 1871.3. The motion was seconded, and with no opposition or further discussion, the motion passed.
- **Renewal of 1445-2016:** Mike Seavey presented a draft PAR for the renewal of 1445-2016, which is the digital test interchange form. The stakeholders, purpose, and scope remain the same, and it will be a dual logo submission to IEC. The motion to approve the PAR was passed without opposition.

    - **Draft PAR Presentation:** Mike Seavey presented the draft PAR for the renewal of 1445-2016, explaining that the stakeholders, purpose, and scope remain unchanged. The renewal will be a dual logo submission to IEC.
    - **Approval Motion:** A motion was made to approve the PAR as written. The motion was seconded, and with no opposition or further discussion, the motion passed.
- **Dates and Locations for 25-2 Committee Meeting:** Mike Seavey discussed the dates and locations for the 25-2 committee meeting, suggesting the first or second week of October. The motion to hold the meeting during the week of October 6th was passed without objection.
    - **Proposed Dates:** Mike Seavey suggested holding the 25-2 committee meeting during the first or second week of October, specifically mentioning the week of October 6th as a potential date.
    - **Approval Motion:** A motion was made to hold the meeting during the week of October 6th. The motion was seconded, and with no objections, the motion passed.
- **Chair's Retirement Announcement:** Mike Seavey announced that they will turn 70 years old in March and that their term as chair will end at the end of the year. The upcoming fall meeting will be their last meeting, and they will work with Jennifer and SI to appoint a new chair.
    - **Retirement Announcement:** Mike Seavey announced that he will turn 70 years old in March and that his term as chair will end at the end of the year. He stated that the upcoming fall meeting will be his last.
    - **Transition Plan:** Mike Seavey mentioned that he will work with Jennifer and SI to appoint a new chair by the time of the fall meeting, ensuring a smooth transition.

Follow-up tasks:

- **Meeting Minutes Approval:** Submit the approved meeting minutes of the 24-2 meetings to the website. (MikeSeavey)
- **PAR Submission:** Submit the withdrawal of PAR 1871.3 to the standards board. (MikeSeavey)
- **PAR Renewal:** Submit the approved PAR for the renewal of 1445-2016 to Nesscom. (MikeSeavey)
- **Fall Meeting Dates:** Confirm the availability of Theresa to host the fall meeting during the week of October 6th. (MikeSeavey)
- **Chair Transition:** Work with Jennifer and SI to appoint a new chair by the fall meeting. (MikeSeavey)