

IEEE SCC20 19-1 Meeting
North Reading, Massachusetts
Committee (e.g.; Steering) Meeting – Room Conference Center
3:00PM – 4:00PM Wednesday April 24, 2019
Minutes

	<u>Items</u>	<u>Category</u>	<u>Person</u>
1	Call to Order	Action	Mike Seavey
	Meeting called to order at 4:05 PM		
2	Quorum Check	Action	Teresa Lopes
2.1	Introductions/Attendance Sheets	Information	Mike Seavey
	We have a quorum, only two members missing		
	<SCC20 19-1 Attendees.pdf>		
3	Agenda		
3.1	Accept Agenda	Action	Mike Seavey
4	Old Business		
4.1	Review/Accept Minutes from Previous Meeting	Action	Teresa Lopes
	There were no comments on the minutes from the previous meeting. The 18-1 minutes are accepted as worded.		
5	WG Reports		
5.1	P1641	Information	Chris Gorringer
	<1641Issues (19-1).pdf>		
6	Study Group Reports		
6.1	1636.1 Amendment	Information	Anand Jain
	Discussion regarding collection schema. The collection schema is incorrect. Going to submit a PAR to update the namespace of the collection schema.		
	1671.1 Corrigendum	Information	Ion Neag
	There are some schema changes needed to achieve consistency with the standard. Going to submit a PAR and form a working group. Changes will be limited to consistency and schema changes only.		
7	BRC Reports		
7.1	1505.1	Information	Rob Spinner
	Need to finish 1505.1 and then form a study group to determine what to do about 1505.		
8	Liaison Reports		
8.1	U.S. DoD	Information	Bill Ross(Mike Malesich)
	<April 2019 SCC20 DoD Report_0419.pdf>		
8.2	U.K. MoD	Information	Malcolm Brown
	<SCC20 19-1 liaison report .pdf>		
8.3	Computer Society	Information	John Sheppard
	None. This is the only society where we get a letter asking to renew the liaison.		

8.4	Aerospace Electronic Systems Society	Information	Joe Stanco
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None

8.5	Instrumentation and Measurement Society	Information	Joe Stanco
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None

8.6	National Defense Industrial Association	Information	Mike Seavey
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Covered during the plenary.

9 **New Business**

9.1	1636.1 Amendment PAR	Information/Action	Anand Jain
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Approved PAR with the following changes

- Moved text in 5.5 to 8.1
- Change text in 5.6 to be the same as the original PAR

Chris Gorringer moves that we approve the PAR. Seconded by Malcolm Brown. No objections. Motion passes.

9.2	1671.1 Amendment PAR	Information/Action	Ion Neag
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Approved PAR with the following changes

- Moved text in 5.5 to 8.1
- Change text in 5.6 to be the same as the original PAR

Malcolm Brown moves that we approve the PAR. Seconded by Teresa Lopes. No objections. Motion passes.

9.2	SCC20 19-2 Meeting	Information/Action	Mike Seavey
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<SCC20 19-2 Meeting.pdf>

19-2 Meeting will be in the UK

9.3	1671 Standards	Information/Action	Mike Seavey
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Had previously discussed running a ballot of all of the standards at same time. This will be a lot of work and can't be done by a single person.

Will start a study group after 1641 goes to ballot.

10	Adjournment	Action	Mike Seavey
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Meeting adjourned at 5:13 PM

SCC 20

19-1

2019.04.24
Plenary &
Stung

W Th Teresa Lopes

W Th Ion Neag

W Th Jean-Christophe HERTZOG

W Th Damien WILLET

W Th Tim Winqvist

W LES ORLIDGE

W Th MALCOLM BROWN

W Th STEVE MANN

W ANAND JAIN

W Th Val Khaldarov

W Th Ron Taylor

W Th Christy Bohn

W Th Chris Gorrage

W Th Mike Seavey

W Th Larry Adams

W MM (phone)

W Daniel Coors (phone)

Rob Spinner

W Th

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IEEE Std 1641 Issues

Overview

543.205.0xy

24 Apr 2019



SPHEREA
TEST & SERVICES

1641 WG Participants

- Chis Gorringer
- Mike Seavey
- Teresa Lopes
- Ion Neag
- Anand Neag
- Jean-Christophe Herzog
- Damien Willemet
- Larry Adams
- Tim Winkvist
- Ron Taylor
- Malcolm Brown
- Christy Bahn

Project Status and Objectives

As we enter our second year we need to ramp up our revision of the standard

Last year we sent out a call for issues and concerns, and received a few comments on the 1641 standard.

For 2019 we need to restructure the Draft Standard to include 70% of the following

- Updated TPL to accommodate all operations

- Introduce new Fluent Interface for .NET

- Identify new BSC components such as “Transform” and “EncodeBit”

- Better define the use of Signal Templates using “AS” (or alternative)

- Integrate with digital bus controls (from ATML)

- Address previous issues raised

- Revisit the use of IDs and IDRef for signal identification and referencing

- Provide a series of “test scripts” for validating signals

At the End of Dec 2019, we should have a revised final (~95% complete), and support files to be able to finalise draft during the 2020#1 spring meeting and initiate new Ballot (early 2020)

Headline Issues

- TPL (matching ATML Operations) - **Ion**
- New .NET Interface - **Ion**
- IDL Interface - **Chris**
- BSC - **Chris**
 - Decode (Bus Protocol)
 - Inverse Transform
 - Model Template
 - Quantize/
 - CBit<Functions>
- Physical anomalies 2.3.4 - **Chris**
- XML use if ID/IDRef - **Teresa**
- Signals and Measurement Methods - **All** read user guide

- 1641 TPL Statements
 - Setup
 - Change
 - Connect
 - Disconnect
 - Enable
 - Disable
 - Read
 - Compare
 - Reset
 - Fetch
- Action: Review UUT & Test Description Operations to provide TPL Mappings and consider how TPL will use structured data for bus objects
- Exchange (Run (or change) or attribute)
- Consider groups on TPL statements for orchestrating and threading
- Encode-Message - does need to be TPL
- Decode-Message
- Read-Attribute
- Discussion topics
 - Can we make 1553 – generic and non 1553 specific

Roadmap for tool sets COTS Interface

Owner:Ion/Chris

- .NET Object Model for fluent Interface (Ion)
- IDL Runtime Update (Chris)
- Action
 - Consider the runtime interface specification to ensure all new features can be exposed and are still relevant to the intended use cases such as .NET
 - Consider updating TPL interface to meet C# standard rather than pseudo script

New BSCs

Owner: Chris

- Existing (Digital Streams)
 - Encode/Decode [HLXZ]
 - Channel Selection
 - Parallel/Serial
- Proposed
 - Template
 - InverseTransform
 - ChannelEncode/ChannelDecode (Bus Protocol) make part of Encode
 - Quantize (functionality included in Encode)
 - CBit<Functions> TSF Library
- Bus Examples
 - Ethernet AFDX/ARINC 726
 - Serial Link
 - HTTP Video
- Action Update Standard to include new BSCs and TSF components

Physical Anomalies

Owner:Chris

- Action
 - Ensure previous 1641 Study Group output 2.3.4, are included into the next release of the standards
- See Downloads area

ID / IDREF

Owner:Teresa

- Determine a “backward” compatibility options for replacing ID/IDREFs used by signals to link the inputs to Signals with a alternative non global method
- Discussion
- Sum, Diff, Product they can contain multiple inputs
- IN='A B C'
- These are validated.
- <Sum In='A B C' .../>
- ...
- <Sum In='A B C'>
 - <Ins>
 - <In name='A' />
 - <In name='B'>
- See IEEE 1641 - 2020 Update\IssuesResolution\ID-IDRefs

User Guide Review

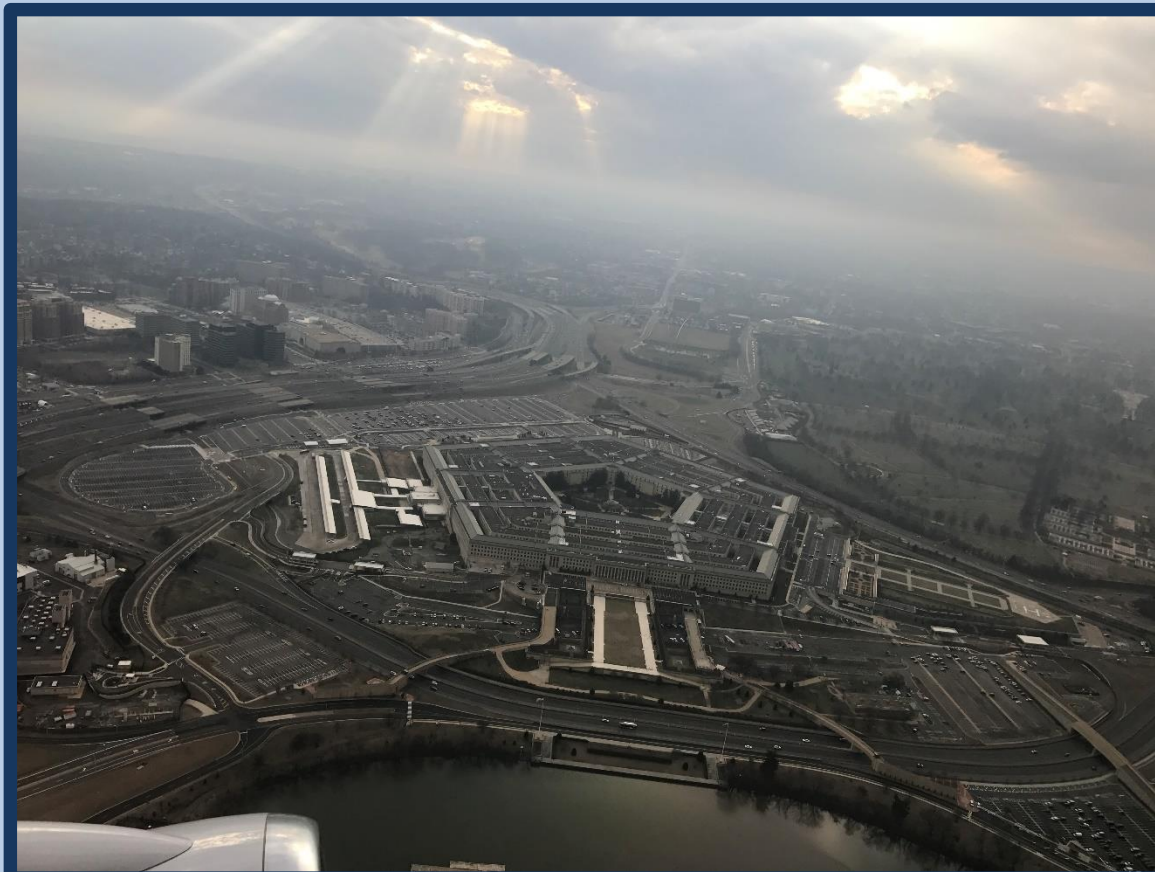
Owner:Larry + Rest of Working Group

- Action
 - Review 1641.1 user guide for standard clarifications that should be highlighted in the 1641 standard
 - Add each item to issue list

Protecting IP and sharing models in a secure/protected manner

Lead: Jean-Christophe

- Discussion
 - Consider how signal models can be protected, encrypted and shared between “competitive” parties to project and safeguard IPR designs while still providing test information



DoD Liaison Report to the SCC20

**Mike Malesich for
Bill Ross
Representing DoD ATS ED
April 2019**

DoD ATS Executive Directorate -- AMB

DoD ATS

- Mark Lysaght is the new PMA-260 Deputy and has interest in speed to the fleet
- Last DoD ATS Management Board (AMB) meeting was conducted 18 April
 - DoD Service ATS status
 - IPT status reports (Framework, TPS, NxTest)
 - Data Analytics
- Next DoD AMB meeting is scheduled for AUTOTESTCON 2018, National Harbor, MD (day TBD)

DoD ATS Framework IPT Initiatives



Current Framework Efforts

- **Continuing to advance Framework elements and standards, mainly via SBIRs**
 - **Automated Generation of Advanced Test Diagrams to Reduce Test Program Set Life-Cycle Cost**
 - ATML
 - **Advanced High Speed Bus Technologies for Units Under Test (UUT), Test and Evaluation**
 - ATML, Signal and Test Definition
 - **Open Architecture Tools to Describe ATE Capabilities**
 - ATML, Signal and Test Definition

Other Initiatives/Concerns

- **Continuing updates to ATS Framework elements and their associated standards**
 - This will result in new ATS Executive Directorate notices for possible inclusion in current and future ATS
 - Considering adding IEEE standards to MIL-PRF-32070, TPS Acquisition
 - Participating in new working group to replace AI-ESTATE
 - Considering standards for CBM+ (DoD Working Group)
- **AutoTestCon sessions**
 - Plenary consisting of DoD Service plans
 - Technical session regarding DoD TPS status and issues

MOD Delegated representative report

My roll continues to provide input into the Standards, bringing Policy up to date by incorporating the standards, and producing best practice with respect to requirements that will enable Project Teams to be more informed when it comes to contracting for support and what is expected of them.

We are continuing to produce material to go into the Defence Logistic Framework (DLF) which provides project teams with the process map and best practice of what is required across the CADMID cycle. This includes reference and links to the SCC20 and standards.

In promoting the standards and the SCC20, I provided a presentation to the Defence & Industry Support Chain Optimization Group (DISCOG) on the 14th March.

The primary purpose of the DISCOG is to drive forward a joint MOD and Industry strategy, to embrace the vision of "providing more effective, agile and affordable support to Defence capabilities by working together as Team Defence"

The DISCOG works across the supply chain, incorporating the Defence Industry, MOD DE&S and MOD Front Line Commands to ensure that best practice in Engineering Support and Supply Chain Management is employed in delivering Defence support solutions.

The presentation included an overview of what the CATS4D had been doing the previous year, what was happening within the SCC20, standards and what was intended for the following year.

Good feedback and interest were provided in what we were doing with the standards, particularly with respect to the diagnostic aide.

With respect to the Diagnostic aide, we are hopefully looking to have a demonstration later in the year and are currently looking to for a system to use it on.

Once again, there is going to be an ATS and R&M seminar on the 25th – 26th September 2019 at MOD Abbey Wood. This is open to Industry, Project teams and Frontline commands. There will be various presentations, with the ATS theme being along the lines of "what tools / standards are available and how are he being effectively used". Use cases would be very useful. I am also looking to get industry to exhibit equipment as well. I currently have 90 attendees signed up.

Upcoming 2019 SCC20 Meetings

Proposed Upcoming SCC20 Meeting

- **SCC20 19-2**

- **We are NOT meeting in conjunction with Autotestcon 2019**

- Due to the Autotestcon dates of August 26-29 being just ahead of Labor Day in the US and overlapping UK holidays; quorum for Steering would be an issue.

- **Location Option 1:** Meet in Bristol, UK ahead of the MoD ATS Seminar and R&M Seminar September 25-26 at Abbywood.

- **When:** September 23-24

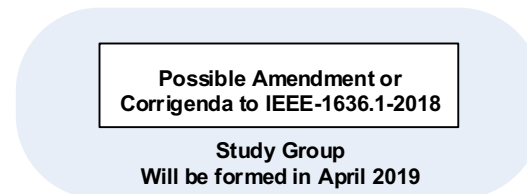
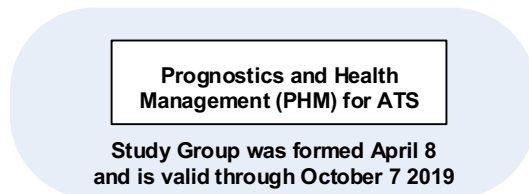
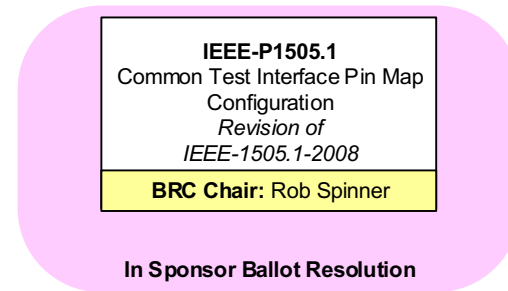
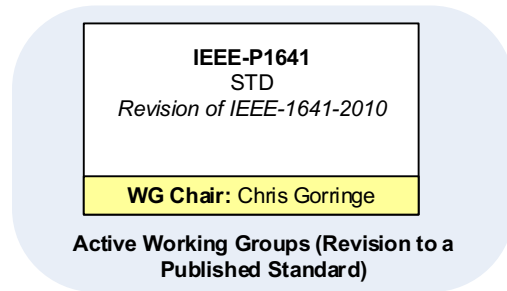
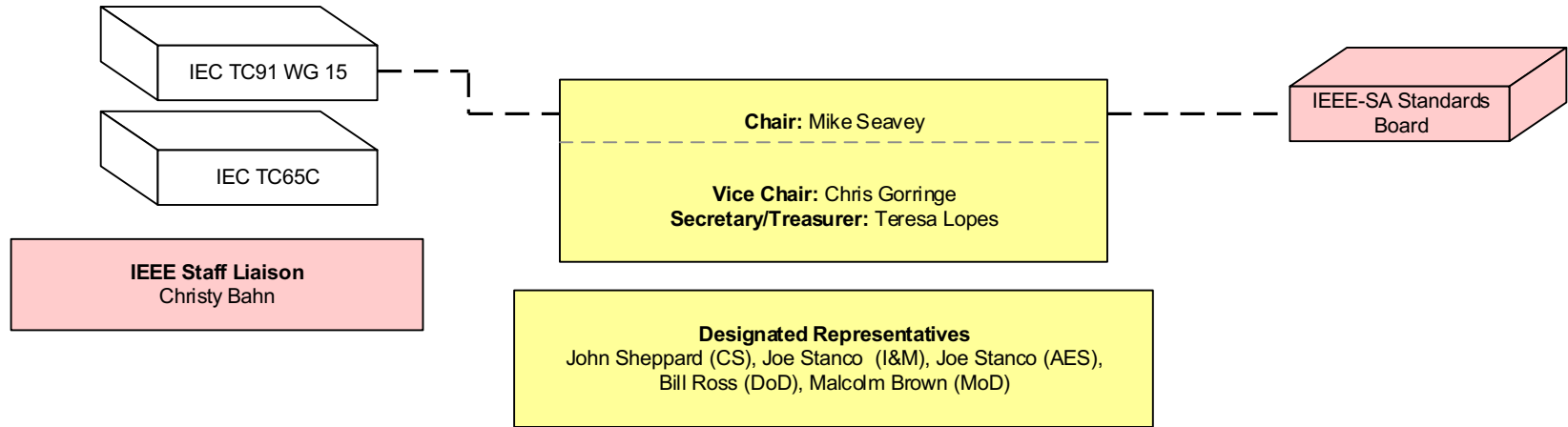
- **Location Option 2:** Meet at the IEEE in Piscataway NJ

- **When:** TBD (1st or 2nd week of October)

- Note: The Final 2019 deadline for submittal to the Standards Board is September 17

Chairs Report

SCC20 Organization



Study Groups

- Prognostics and Health Management (PHM) for Automatic Test Systems (ATS)
 - Chaired by John Sheppard
 - An Electronic meeting was held April 8
 - ~11 people participated
 - NAVAIR is very interested in this becoming a standard.
 - Discussion included
 - Revising AI-ESTATE – and without using EXPRESS
 - Revising SIMICA, and/or Adding to the SIMICA family
 - Creating a new standard
 - Not conflicting existing, or in-work, PHM standards
 - From ISO, IEC, SAE etc.
 - Using JSON (JavaScript Object Notation)
 - It is anticipated a PAR will be coming to Steering in May

Study Groups

- IEEE-1636.1-2018
- A series of emails have been exchanged with me by Technology Service Corporation in Bloomington, IN
 - It appears that the TestResults.xsd schema has a target namespace of "urn:IEEE-1636.1:2013:TestResults" whereas the root element of the TestResultsCollection.xsd defines the tr namespace as "xmlns:tr="urn:IEEE-1636.1:2018:TestResults".
- Chaired by TBD
 - This Study Group will meet this week
 - Amendments and corrigenda are processed with separate PARs and balloted independently in accordance with the procedures, including submission to the IEEE-SA Standards Board.
 - A corrigendum may not extend the scope of the existing standard.
 - An amendment may extend the scope of the existing standard.
 - All PARs for amendments and corrigenda shall include a project scope.
 - All amendments and corrigenda shall follow the style conventions for indicating changes defined in the IEEE Standards Style Manual.

SCC20 Standards Tracking

Publication	Project	PAR by	PAR Approval Date	PAR Expiration Date	Valid Standard Until	IEC Adoption	Notes
488.1-2003	—		—	—	3/19/2019	IEC 60488-1 First Edition 2004-07	
488.2-1992	—		—	—	6/17/2020	IEC 60488-2 First Edition 2004-05	
716-1995(R2011)	—		—	—	12/31/2021	IEC 61926-1 Ed. 1.0	Will be Administratively Withdrawn December 2021.
771-1998(R2009)	—		—	—	12/9/2019		Will be Administratively Withdrawn December 2019.
1155-1992	—		—	—	—	—	Was Administratively Withdrawn December 2018.
1174-2000	—		—	—	3/19/2019	—	Will be Administratively Withdrawn December 2019.
1232-2010	—	2016	—	—	12/8/2020	IEC 62243 Ed. 2.0	
1232.3-2014	—	2020	—	—	12/31/2024		
1445-2016	—	—	—	—	12/8/2026	IEC 61445 Ed 1.0	IEEE Published February 2017
1505-2010	—	2016	—	—	9/30/2020	IEC 63004 Ed 1.0	
1505.1-2008	P1505.1	—	December 5, 2015	December 31, 2019	12/31/2018	IEC 63003 Ed 1.0	In Sponsor Ballot Resolution, -2008 will be administratively withdrawn December 2019
1505.3-2015	—	2021	—	—	12/31/2025		
1546-2000(R2011)	—	—	—	—	12/31/2021		Will be Administratively Withdrawn December 2021.
1636-2018		2025	—	—	12/31/2029	IEC 61636 Ed. 1.0	Published February 28, 2019
1636.1-2018		2025	—	—	12/31/2029	IEC 61636-1 Ed. 1.0	Published March 8, 2019
1636.2-2018		2025	—	—	12/31/2029		Published March 8, 2019
1636.99-2013	—	—	—	—	12/31/2023	IEC 61636-99 Ed. 1.0	
1641-2010	P1641	—	December 7, 2016	December 31, 2020	6/17/2020	IEC 62529 Ed. 2.0	
1641.1-2013	—	2019	—	—	12/31/2023		
1641.1a-2018	—	2024	—	—	12/31/2028		Published March 8, 2018
1671-2010	—	2016	—	—	9/30/2020	IEC 61671 Ed 1.0	
1671.1-2017	—	2023	—	—	12/31/2027		Published March 19, 2018
1671.2-2012	—	2018	—	—	12/31/2022	IEC 61671-2 Ed 1.0	
1671.3-2017	—	2023	—	—	12/31/2027		Published April 13, 2018
1671.4-2014	—	2020	—	—	12/31/2024	IEC 61671-4 Ed 1.0	
1671.5-2015	—	2021	—	—	12/31/2025	IEC 61671-5 Ed 1.0	
1671.6-2015	—	2021	—	—	12/31/2025	IEC 61671-6 Ed 1.0	
1871.1-2014	—	2020	—	—	12/31/2024		
1871.2-2017	—	2023	—	—	12/31/2027		Published March 14, 2018
As of 3/28/2019		Discuss	IEC represents previous version of IEEE Published Standard	PAR due to expire in 2019	In ballot	IEC TC91 WG 15	Design Automation: Testing of Electro technical Products
						IEC TC65C	Industrial Networks

SCC20 Activity since the 18-2 Meeting

- SCC20 Annual Report
 - Created and Submitted to the Standards Board in February
 - Report was approved by the Standards Board at the March meeting.
- SCC20 Financial Report
 - Submitted in March
- SCC20 Chair
 - I was reappointed by the Standards Board for 2019

SCC20 Activity since the 18-2 Meeting

- Collaboration with IEC TC91 WG 15
 - Due to urgent and severe health problems, Narayanan is stepping down from the position of WG15 co-convenor.
 - Skipping the April North Reading WG15 meeting.
 - The next WG 15 meeting is Friday May 24 from 9:00-12:00 at VDE/DKE in Frankfurt, Germany
- Collaboration with SCC21 (Standards Coordinating Committee on Fuel Cells, Photovoltaics, Dispersed Generation, and Energy Storage)
 - Mark Siira is the Chair of SCC21
 - They are interested in how “we” define test procedures
 - In association with P1547.1 test procedures for interconnection and interoperability

SCC20 Activity since the 18-2 Meeting

- For disclosure:
- As I am on the NDIA Automatic Test Committee (ATC) I will report to SCC20 ATC Activities; and I will report to the NDIA ATC at their fall meeting SCC20 Activity.
 - The ATC met March 26 at the NDIA HQ in Arlington, VA
- I am an Technical Program Co-Chair for IEEE Autotestcon 2019

SCC20 Activity since the 18-2 Meeting

- Published Revisions to Standards:
- IEEE-1636-2018 IEEE Standard for Software Interface for Maintenance Information Collection and Analysis (SIMICA)
 - Published: February 28, 2019
- IEEE-1636.1-2018 SIMICA: Test Results and Session Information
 - Published: March 8, 2019
- IEEE-1636.2-2018 SIMICA: Maintenance Action Information
 - Published: March 8, 2019

SCC20 Activity since the 18-2 Meeting

- The Standards Board requested that the following maintain active status:
- IEEE-488.1-2003 (IEC 60488-1 (2004))
 - IEEE Last Revised in 2002 (Reaffirmation)
 - Valid until March 2019
- ANSI/IEEE-488.2-1992 (IEC 60488-2 (2004))
 - IEEE Last Revised in 1978
 - Valid until June 2020

SCC20 Activity since the 18-2 Meeting

- The Standards Board requested that the following maintain active status:
- Ahead of PARs, I have
 - Exported the PDF of the 488.2 standard to Word to evaluate results
 - The text and tables are not “clean”
 - The Figures did not move to Word
 - All Figures also need to be re-drawn – there is no source from 1978
 - Removed the IEC content
 - Used the latest IEEE Word Template
 - Began merging the Word file with the template to determine an estimated time of the effort to get to ballot.

SCC20 Activity since the 18-2 Meeting

- The Standards Board requested that the following maintain active status:
- Considering both 'clean' and 'differences' documents be created balloted and published – want to discuss this with the IEEE Staff
- Considering requesting the ISO source files, correcting & updating the text, tables, and figures, and using that for the sponsor ballot – want to discuss this with the IEEE Staff
- Also want to discuss with IEEE Staff NesCom & the ballot constituency (these were in TC8) & (Ballot goes to the entire I&M Society ? and maybe even ISO?)

SASB Meeting Deadlines & Schedules 2019

Deadline for Submission	Meeting
December 18, 2018	January 25: NesCom/RevCom telecon
February 8, 2019	March 19-21: Munich Germany
March 22, 2019	May 2: NesCom/RevCom telecom
May 3, 2019	June 11-13: Panama City Panama
July 26, 2019	September 4: NesCom/RevCom telecon
	September 5: SASB telecon
September 17, 2019	November 5-7: Piscataway NJ

Standards Board Activity

The current version of the IEEE-SA Standards Board Bylaws is available at:

<https://standards.ieee.org/about/policies/bylaws/index.html> (HTML version)

http://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf (PDF version)

The current version of the IEEE-SA Standards Board Operations Manual is available at:

<https://standards.ieee.org/about/policies/opman/index.html> (HTML version)

http://standards.ieee.org/develop/policies/opman/sb_om.pdf (PDF version)

The text of the changes made to these documents (approved by SASB/BOG in 2018) can be found at:

https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/policy_rev.pdf

Please read through these changes so that you are familiar with the current P&P.

The IEEE-SA has updated its Copyright Policy. The updates to the policy were approved by the IEEE-SA Standards Board in December 2018 and by the IEEE-SA Board of Governors in March 2019.

Questions?