

IEEE NPEC Subcommittee SC-3
Operations, Maintenance, Aging, Testing, & Reliability
Meeting 18-02 Minutes



Tuesday Morning, 24 July, 2018
Mystic, CT

Members Present:

George Ballassi	Ngola Otto
John Beatty	Clint Pierce
Suresh Channarasappa	Ted Riccio
Tom Crawford (Vice Chair)	Rebecca Steinman (Secretary)
Jim Liming ^T (C)	John Stevens ^T
Jacob Kulangara ^T	Yvonne Williams (Chair)
Kirk Melson	

Members Absent:

Ed Mohtashemi	Steve Hutchins (C)
Phil Ward	Joe Napper (C)
Kiang Zee	James Parello (C)
Gopal Aravapalli (C)	Craig Sellers (C)
Hamid Heidarisaafa (C)	John Taylor (C)
Sharon Honecker (C)	

Guests: Malia Zaman

^T Joined the meeting via the web-based Join Me interface.

1.0 Introduction

• Opening Remarks and Meeting Agenda

Yvonne Williams called the meeting to order at about 08:55. The delayed call to order was due to audio difficulties with the Join Me interface. It was announced that S18-02 is Yvonne's last meeting as Chair. Tom will take over the Chair's role, temporarily, starting at S19-01. The agenda was reviewed - one new business item added for Std 1819 and moved Patent Slides discussion up closer to the start of the agenda per Malia's comment at the last meeting. George Ballassi moved to approve the agenda as amended, Tom Crawford seconded, and the agenda was approved. See Attachment 1 for the approved agenda.

Yvonne reviewed the 2018 IEEE Patent Slides, which are contained in Attachment 9. No one voiced questions or concerns related to this topic.

2.0 Secretary's Report

• SC-3 Approval of S18-1 Meeting Minutes

Rebecca sent the draft meeting minutes to the membership via email prior to the meeting. Ted Riccio noted that the \$TBD placeholder under the Alligator Report section needed to

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be updated. The projector shipping receipt amount for S18-01 was \$52.16. Tom Crawford moved to approve the corrected minutes and George Ballassi seconded. The amended minutes were approved and uploaded to the Approved Minutes folder on the NPEC SC3 iMeet Central site.

- **Action Item Status**

The status of the action items was reviewed; the updated action item list is provided in Attachment 4.

- **SC-3 Membership**

Yvonne reviewed the membership, noting that there were 10 voting members physically in attendance, plus 3 on telecon; we have 15 members total at present; therefore, a quorum was met for conducting business at the meeting. The Rolling Attendance report is contained in Attachment 2. The current membership roster will be posted in the Member Roster folder on the NPEC SC3 iMeet Central site.

- **Alligator Fund**

The status of the alligator fund was reviewed, and it was noted that the fund balance has not changed since the last meeting. We agreed, once again, that there would be no collection for this meeting. The Alligator Fund status is contained in Attachment 3.

3.0 Chair's Report

- **Leadership Review / Membership**

The current officers are: Yvonne Williams, Chair; Tom Crawford, Vice Chair; and Rebecca Steinman, Secretary. Yvonne will step down at the end of the 18-2 meeting. Tom has agreed to temporarily fill-in as SC-3 Chair. Tom reiterated that new people need to step into the leadership roles, and that each committee member needs to push hard to bring in at least one potential new member.

- **Leadership Telecons**

There were no Leadership telecons since the previous meeting.

- **NPEC Preparations**

There are no preview or work-in-progress activities associated with SC-3 this meeting.

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4.0 Working Group Reports

- **WG-3.1**

Discussions regarding how to integrate Std 1819 across the NPEC standards resulted in the addition of a “new business” item to the agenda.

Two standards are currently being worked for revision. P336 is in progress and will be ported into the template, then made available for member reviews (PAR expires Dec 2020). P338 PAR has been sent to AdCom (was approved N18-2 and sent to NesCom for approval); some work was done on it as well. It will also be ported into the template, then made available for member reviews.

- **WG-3.2**

Randy Flowers, Chair, reconstituted WG 3.2 in support of a revision to IEEE 692, which expires in 2023. Activities of the reconstituted WG as of this meeting are as follows:

- Presented PAR P692 earlier this year to review and revise Standard 692-2013. The PAR was approved in May by SC-3 and ready for NPEC review and approval.
- PAR for P692 submitted to NPEC Standard Coordinator, Greg Hostetter, by T. Crawford. NPEC approved and forwarded the PAR to NesCom.
- Solicited 3 new members from industry, bringing the total to 10 members.
- Scheduled a face-to-face meeting in October to begin the review process for Standard 692-2013 and to discuss the need for new officers due to the retirement of both Randy Flowers and Tom Worrell.

- **WG-3.3**

The only standard in work is IEEE 577. The PAR has been approved, and a working copy of IEEE 577 is in the iMeet workspace. John Stevens will send an email out to everyone when the review should be complete so that the WG can try to present the standard during the next NPEC meeting. The other two standards are not due for rework until 2023 and 2026.

- **WG-3.4**

WG 3.4 is also dormant. IEEE 1205 was last issued in 2014. Rebecca Steinman continues as Chair. IEEE 1205 expires in 2024. The WG is to be reconstituted in 2020, unless the current NRC questions regarding Arrhenius activation energy prompts a need for an earlier reconstitution. Rebecca Steinman is in the process of uploading the relevant development archive files into the new WG 3.4 iMeet Central workspace.

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5.0 Liaison Reports

Liaison reports were provided as follows:

- NRC – Update provided by Ngola Otto. See Attachment 7 for details.
- ASME – No update was available.
- NRMCC – No update as group activity has slowed.

6.0 Old Business

Tom reviewed the SC-3 Master Schedule. A copy of the updated schedule is provided in Attachment 8. The current NPEC SC-3 Standards Schedule is provided in Attachment 5.

7.0 New Business

Malia Zaman provided a brief update on changes to the IEEE communications policy in order to come into compliance with the EU General Data Protection Regulation (GDPR). Basic highlights of her presentation were that (1) official personal information of SC and WG members (i.e. roster contact information) should only be stored in an IEEE approved location (i.e., iMeet Central, password protected page on the WG web page, etc.) and (2) email messages should be sent from iMeet Central or use bcc to prevent showing all members included on the message.

Discussions about Std 1819 and how to familiarize other SCs / WGs with it and how it can assist with other standards were held. Gradually it became clear that the issues were not limited to 1819. Standards are being balloted on qualification but have no indication that 1205 exists, for example. The lack of coordination needs to be addressed. Various ideas were developed for Yvonne to take to AdCom:

- How to introduce standards to other SCs / WGs
- Update presentation chart for the various SCs/WGs/stds in NPEC
- Encourage making comments, asking questions during previews
- Want people to expand the box, think about how to use other stds
- Small modular reactors – how is their advent going to affect standards – develop new stds? New std for SMRs that shows how to interpret the others for use on SMRs?
- Set aside part of SC / WG meetings for presentations by other groups on their standards
- Vice chairs meet while chairs are at AdCom to exchange information

Rebecca Steinman reported on the status of the SC-3 web site and the new iMeet Central workspaces for SC3 and each of the 4 WGs. The organization of files/folders was discussed, and Rebecca took an action item to update the SC3 folders structure per the discussion. She will also set permissions so that all SC3 members have at a minimum

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”Read” access to each of the 4 WG workspaces. WG members will have full access "Read/Write" to workspaces for which they are active members. The WG chair will be responsible for updating and controlling future access changes to the WG workspaces. Rebecca and Tom are available to assist.

8.0 Action Items

Rebecca reviewed the new action items from this meeting. The revised AI List provided in Attachment 4 includes the S18-2 update of open action items, as well as new action items from the S18-2 meeting.

Yvonne reported that the next NPEC meeting (19-1) is scheduled for January 28-30, 2019 in Charlotte, NC.

John Beatty moved to adjourn, Tom Crawford seconded. The motion was unanimously accepted, and the meeting adjourned at 11:30 AM.

Prepared by Rebecca Steinman, SC-3 Secretary.

iMeet Central SC-3 Workspace:

<https://iee-sa.imeetcentral.com/npecsc3/>

SC-3 Public Website Information:

<http://sites.ieee.org/npec-sc3/>

NPEC Standards Download Website Information:

<http://sites.ieee.org/pes-npec/npec-standards/>

Login Name:

Password:

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ATTACHMENTS

Attachment 1 Agenda	Attachment 2 Rolling Attendance	Attachment 3 Alligator Fund
Attachment 4 Action Items	Attachment 5 NPEC SC-3 Standards Status Spreadsheet	Attachment 6 ASME Liaison Report (None)
Attachment 7 NRC Liaison Report	Attachment 8 SC-3 Standards Schedule	Attachment 9 IEEE Patent Slides

Agenda – Meeting 18-2 – Mystic, CT

NPEC Subcommittee SC-3, *Operations, Maintenance, Aging, Testing, and Reliability*

Meeting Date/Time:	Tuesday, 07/24/2018 0800-1200	Chairman :	Yvonne Williams
		Vice Chair:	Tom Crawford
		Secretary:	Rebecca Steinman

Desired Outcomes:	<ol style="list-style-type: none"> 1. Review status/activities of each SC Working Group 2. Review status of membership and officer succession 3. Update SC3 standards master schedule
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WHAT	WHO	WHEN
Welcome, Review Desired Outcomes <ul style="list-style-type: none"> • Meeting logistics • Introductions 	Y. Williams All	0800-0815
Chairman's Introduction <ul style="list-style-type: none"> • Opening remarks • Review/approve agenda 	Y. Williams	0815-0820
IEEE Patent Slides	Y. Williams	0820-0825
Secretary's Report <ul style="list-style-type: none"> • Approval of SC3 18-1 Meeting Minutes • Action Item review/status • SC3 membership review • Alligator fund report 	R. Steinman	0825-0850
Chairman's Report <ul style="list-style-type: none"> • SC3 Leadership – Officers and succession planning • Leadership telecons – none held • NPEC meeting preparations 	Y. Williams	0850-0900
NPEC report – agenda for Wednesday meeting	Y. Williams	0900-0905
BREAK	All	0910-0930
Working Group Reports <ul style="list-style-type: none"> • WG-3.1 (Testing) – 336 expires in 2020, 338 in 2022, 1819 in 2026 • WG-3.2 (Security) – 692 expires in 2023 • WG-3.3 (Reliability) – 577 expires in 2022, 933 in 2023, 352 in 2026 • WG-3.4 (Aging) – 1205 expires in 2024 	J. Beatty T. Worrell J. Stevens none	0930-0940 0940-0950 0950-1000
Liaison Reports <ul style="list-style-type: none"> • NRC Report • ASME Report • JCNRM Report 	N. Otto C. Sellers G. Ballassi	1000-1010 1010-1020 1020-1030
Old Business <ul style="list-style-type: none"> • Master schedule for Std review/updates 	T. Crawford	1030-1040
New Business/Rumor Mill/Drumbeats <ul style="list-style-type: none"> • SC-3 website and iMeet Central accounts • Cross-reference to IEEE Std 1819 in IEEE Std 627 	R. Steinman	1040-1115
Review of Action Items	R. Steinman	1115-1125
Next meeting	Y. Williams	1125-1130
Meeting closeout/adjournment	Y. Williams	1130

Attachment 3

NPEC Subcommittee SC-3

Operations, Maintenance, Aging, Testing, and Reliability

Alligator Fund

The Alligator Fund is made up of voluntary contributions from SC-3 members to defray the cost of meeting rooms, refreshments, etc.

Meeting	Beginning Balance	Meeting Contributions	Expenses	Ending Balance
S10-1	\$694.66	\$220.00	\$380.90	\$533.76
S10-2	\$533.76	\$425.00	\$474.90	\$483.86
S11-1	\$483.86	\$200.00	\$14.00	\$669.86
S11-2	\$669.86	\$430.00	\$480.50	\$619.36
S12-1	\$619.36	\$340.00	\$203.00	\$756.36
S12-2	\$756.36	\$150.00	\$0.00	\$906.36
S13-1	\$906.36	\$0.00	\$0.00	\$906.36
S13-2	\$906.36	\$0.00	\$0.00	\$906.36
S14-1	\$906.36	\$0.00	\$0.00	\$906.36
S14-2	\$906.36	\$0.00	\$0.00	\$906.36
S15-1	\$906.36	\$0.00	\$0.00	\$906.36
S15-2	\$906.36	\$0.00	\$0.00	\$906.36
S16-1	\$906.36	\$0.00	\$0.00	\$906.36
S16-2	\$906.36	\$0.00	\$0.00	\$906.36
S17-1	\$906.36	\$0.00	\$65.19	\$841.17
S17-2	\$841.17	\$0.00	\$51.08	\$790.09
S18-1	\$790.09	\$0.00	\$52.16	\$737.93
S18-2	\$737.93	\$0.00	\$0.00	\$737.93

Attachment 4

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Action Items List

Item No.	Subcommittee 3.0 Actions	Owner	Due Date	Closure Comments
12-2-B	Develop a Template / Strawman for gap analysis for SC3 standards	Yvonne	13-2 mtg.	No follow-on as of S17-2 meeting. Jim Liming offered to help Yvonne. Consider dropping if no action by 18-1 mtg. S18-2: Drop action going forward.
14-1-B	Present the conflict to SA for resolution relative to meeting notice distribution in section 6.0 of the IEEE SA Working Group Policies & Procedures manual template.	Malia	17-2 mtg.	Action pending. During the S16-1 meeting, Malia reported that SA is developing a new template, and we should wait and see if that resolves the issue. S17-2: Follow-up with Malia as to whether the revision addressed the concern. S18-2: New template and process has addressed the issue being tracked here. This item is CLOSED.
15-2-A	Review the CD of files from WG-3.2 for unresolved comments and also contact Randy Flowers concerning WG-3.2 plans.	Yvonne	18-2 mtg.	Yvonne contacted Randy in Spring 2017; he will be retiring soon, but agreed to reach out to other WG members to try and recruit a replacement. S18-2 WG 3.2 has been reconstituted per WG chair report. This action is CLOSED.
17-1-A	Presentation to NPEC on coordination/integration of risk-informed standard 1819 with the other NPEC standards	Yvonne / George	18-1 mtg.	Yvonne contacted ADCOM to recommend that SC-3 make a presentation to NPEC on the history, status, and future integration of P-1819 with other NPEC standards [Complete]. George Ballassi developed the presentation, and SC-3 reviewed and approved it for presentation at NPEC 18-1 meeting on 24 Jan 2018. Presentation occurred at N18-1 meeting. Thanks to George for a good job. It was noted by Tom Crawford that other WGs are starting to reference 1819. This action is CLOSED.
17-2-A	Investigate IEEE service/resource for storing important SC-3 and WG documents.	Rebecca	18-1 mtg.	SC3 has used Join.Me for remote participation in the last few SC3 business meetings. As of the S18-2 meeting we have separate collaboration workspaces for the SC and each WG on IEEE's iMeet Central. The intent is to move file storage off the web page to iMeet Central by the end of 2018. This action is CLOSED.
17-2-B	Submit at least one topic to the SC-3 chair that you as a SC member would like to see presented as a 1-hr SC-3 training/technical session at a future mtg.	All Members	11/30/17	S18-2: Keep this item open and reminder all members to contribute ideas.
18-1-A	Double check S16-2 membership numbers and update Minutes as appropriate.	Tom	18-2 mtg.	Tom confirmed that the Minutes should show 17 members, as of the time of the S17-2 meeting. The total dropped to 16 again after the meeting, when Jim Liming changed to "Corresponding" status. This will be reflected in the final Minutes. This item is CLOSED.
18-1-B	Send an email to Corresponding members requesting that each update his/her status.	Tom	18-2 mtg.	Tom sent emails to the non-attending members and Corresponding members on 29 JAN 2018 requesting they update Roster information and state their intentions relative to continued membership and future participation. S18-2 Hamid Heidarisaifa, Jim Liming, Joe Napper, and Craig Sellers all responded that they wish to continue as Corresponding Members. This action is CLOSED.
18-1-C	Contact Joe Napper regarding his status.	Hamid	18-2 mtg.	Joe would like to remain a corresponding member. This action is CLOSED.
18-1-D	Request Malia to identify which of our members are SA members.	Tom	18-2 mtg.	Malia responded, and this information is now reflected on the member roster. This action is CLOSED.
18-2-A	Update the iMeet Central workspaces so that everyone has access to all five workspaces, but only WG members can change files on the WG-specific workspaces. Clean up the archive/working file storage as discussed during S18-2.	Rebecca	12/31/18	
18-2-B	Update the standards schedule to show a 10-year look ahead and upload the master file to the NPEC SC3 iMeet Central workspace.	Tom	19-1 mtg	

SC-3 "Operations, Maintenance, Aging, Testing & Reliability"
Chair: Yvonne Williams

PROJECT	Year	Standard Expiration	Re-Affirmation	PAR Expiration	TITLE	Regulatory Guide	Working Group	Chair	Cycle Year	N18-2	N19-1	N19-2	N20-1	Status/Comments
336	2010	2020		Dec-2020	IEEE Standard Installation, Inspection, and Testing Requirements for Power, Instrumentation, and Control Equipment at Nuclear Facilities	1.30 - 1972	1	Y. Williams	8					PAR approved by ADCOM at 16-02 and submitted to RevCom. PAR approved by SB 9/22/16
338	2012	2022		N/A	IEEE Standard Criteria for the Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems	1.118 - 1995	1	Y. Williams	6	PAR				Std approved by SB Feb. 6, 2012 Published on 23 March 2012 PAR Approved by ADCOM 7/24/2018
352	2016	2026		N/A	IEEE Guide for General Principles of Reliability Analysis of Nuclear Power Generating Stations and Other Nuclear Facilities		3	J. Stevens	2					Standard revision approved by SB Dec. 7, 2016 Standard revision approved by SB Sept, 2016
577	2012	2022		Dec-2022	IEEE Standard Requirements for Reliability Analysis in the Design and Operation of Safety Systems for Nuclear Power Generating Stations		3	J. Stevens	6					Approved by SASB Aug. 30, 2012 Published on Oct. 19, 2012 PAR approved by Std Brd 3/8/2018
692	2013	2023		N/A	IEEE Standard Criteria for Security Systems for Nuclear Power Generating Stations		2	R. Flowers	5					Issued by Sd bd Aug. 2013. Published on 30 Sept 2013 PAR ????
933	2013	2023		N/A	IEEE Guide for Definition of Reliability Program Plans for Nuclear Generating Stations and Other Nuclear Facilities		3	J. Stevens	5					Approved by SA BD on Dec. 11, 2013 Published 10 Jan 2014
1205	2014	2024		N/A	IEEE Guide for Assessing, Monitoring, and Mitigating Aging Effects on Class 1E Equipment used in Nuclear Power Generating Stations	1.218 - 2012	4	R. Steinman	4					Approved by SB March 27, 2014 Published 16 May 2014
1819	2016	2026		N/A	Standard for Risk-Informed Categorization and Treatment of Electrical Equipment in Nuclear Facilities		1	Y. Williams	2					Standard revision approved by SB Sept, 2016

NRC Liaison Report - IEEE PES ESSB Summer 2018 Meeting

***Annie Caputo and David A. Wright, nominated by President Trump and confirmed by the United States Senate, were sworn in as NRC Commissioners in May 2018. The NRC Commission is now fully-staffed with 5 members.

1. Operating Reactors

- a. Turkey Point Subsequent License Renewal (SLR) Application submitted January 2018 and accepted for review on 5/2/18. Letters of intent for SLR Applications have been received from Peach Bottom, Surry, and North Anna.
- b. TSTF-505 updated traveler and SE template are expected to be published in the next coming months.
 - i. Battery TS LCO implementation – LCO 3.8.4
- c. Open Phase Condition – The staff has issued TI 2515/194 for regional implementation. The initial inspections will cover four different designs the plants implemented in accordance with NEI voluntary initiative. The initial inspections concluded in June 2018. In addition, staff is currently reviewing LARs from Surry and TVA plants.
- d. EQ - Inspections are ongoing. A public meeting with industry was held in May as a follow-up to December 2017 meeting.
- e. All licensees have declared compliance with post-Fukushima Orders EA-12-049 (Mitigating Strategies) and EA-12-051 (Spent Fuel Pool Level Instrumentation).

2. New Reactors

- a. The Commission issued the Combined Licenses for Turkey Point, Units 6 and 7, in April 2018.
- b. APR1400 Design Certification Review is currently in Phase 5 (Response to ACRS regarding SER with no Open Items issued) and 6 (Final SER issued); no electrical design open items.
- c. NuScale Design Certification Review is ongoing. ACRS SubCommittee Meeting on Chapter 8 (Electric Systems) took place in June 2018.
 - i. NuScale Power's "Safety Classification of Passive Nuclear Power Plant Electrical Systems" Licensing Topical Report was approved by the NRC on January 2018.
- d. With respect to the Advanced Reactor General Design Criteria, the staff issued, RG 1.232, "Developing Principal Design Criteria for Non-Light Water Reactors."

3. Rulemaking

- a. The final rule on Mitigation of Beyond-Design-Basis Events is under Commission's consideration for approval.

4. Research

- a. NRC's Office of Research is in the process to endorse IEEE 741 (Appendix A related to DVR and LOV) and is awaiting publication of IEEE 946 to initiate the process for endorsing the standard.
- b. Regulatory Guide 1.158, "Qualification of Safety-Related Lead Storage Batteries for NPPs," endorsing IEEE Standard 535-2013) was published in April 2018.
- c. Regulatory Guide 1.234, "Evaluating Deviations and Reporting Defects and Noncompliance Under 10 CFR Part 21" was issued in April 2018
- d. NUREG/CR-7229, "DC Power System Fault Contributions from the Battery and Battery Chargers used in Nuclear Power Plants," has been published.

- e. DG-1333, "Evaluating Electromagnetic and Radio Frequency Interference in Safety-Related I&C Systems," has been published (ADAMS Accession No. ML16281A531) and comments were due by June 25, 2018.

5. Part 21

- a. The following Part 21 Reports were issued in the past 6 months (more information available on the NRC website under the Part 21 Reports webpage):
 - i. 2018-12-00 - Notification of 10 CFR 21 Defect – Failure of Relays to Change State
 - ii. 2018-11-00 - Interim Report Related to Failure of a Diesel Generator Pressure Switch
 - iii. 2018-06-01 - Dedicating Entity Part 21 Notification - General Electric CR120BD Relay
 - iv. 2018-07-00 - Notification for Certain Rosemount Model 1154 and Model 1154 Series H Pressure Transmitters and 01154-0153-0002 Amplifier Circuit Card Assemblies
 - v. 2018-06-00 - Inadequate Dedication of Relays
 - vi. 2018-04-00 - Interim Part 21 Report Related to a Failed Bench Test of a General Electric Model CR124C028 Thermal Overload Relay
 - vii. 2018-03-00 - Initial and Final Part 21 Report Related to an Incorrectly Sized Wire Lug found in a 480VAC Westinghouse / Eaton Circuit Breaker Cubicle

6. Generic Communications

- a. IN 17-06 - Battery and Battery Charger Short-circuit Current Contributions to a Fault on the Direct Current Distribution System
- b. IN 17-05 - Potential Binding of Schneider Electric/Square-D Masterpact NT and NW 480-VAC Circuit Breaker Anti- Pump Feature

Attachment 8

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SC-3 Standards Schedule

	WG 3.1	WG 3.2	WG 3.3	WG 3.4
2017-1	336		352	
2017-2	336			
2018-1	336		577	
2018-2	336	692	577	
2019-1	336	692	577	
2019-2	338	692	577	
2020-1	338	692	577	
2020-2	338	692	577	
2021-1	338	692	933	1205
2021-2	338	692	933	1205
2022-1	338	692	933	1205
2022-2	338	692	933	1205
2023-1	1819	692	933	1205
2023-2	1819		352	
2024-1	1819		352	
2024-2	1819		352	
2025-1	1819		352	
2025-2	1819		352	
2026-1	336		352	
2026-2	336		352	
2027-1	336			
2027-2	336			
2028-1	336			
2028-2	336		577	
2028-1	338		577	
2028-2	338		577	
2028-1	338		577	
2028-2	338		577	
2029-1	338		577	
2029-2	338		577	

STD	Issued	Expires	Age as of: 07/24/2018	Time left (yrs)
336	09/30/2010	09/30/2020	7.8	2.2
338	03/23/2012	03/23/2022	6.3	3.7
352	12/07/2016	12/07/2026	1.6	8.4
577	10/19/2012	10/19/2022	5.8	4.2
692	09/30/2013	09/30/2023	4.8	5.2
933	01/10/2014	01/10/2024	4.5	5.5
1205	05/16/2014	05/16/2024	4.2	5.8
1819	09/22/2016	09/22/2026	1.8	8.2

Balloting
and
Approval
Includes:

- 1 Preview, ballot pool, ballot, receive comments
- 2 Resolve comments, recirc
- 3 Submit to/ revcom approval/publish

Instructions for the WG Chair

The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:

- **Show slides #1 through #4 of this presentation**
- **Advise the WG attendees that:**
 - IEEE's patent policy is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
 - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
 - There may be Essential Patent Claims of which IEEE is not aware. Additionally, neither IEEE, the WG, nor the WG Chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.
- **Instruct the WG Secretary to record in the minutes of the relevant WG meeting:**
 - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
 - That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard
 - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.
- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG Chair review the guidance in *IEEE-SA Standards Board Operations Manual* 6.3.5 and in FAQs 14 and 15 on inclusion of potential Essential Patent Claims by incorporation or by reference.

Note: **WG** includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.

Participants have a duty to inform the IEEE

- Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
- Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims

**Early identification of holders of potential
Essential Patent Claims is encouraged**

Ways to inform IEEE

- Cause an LOA to be submitted to the IEEE-SA (patcom@ieee.org); or
- Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
- **Speak up now and respond to this Call for Potentially Essential Patents**

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

Other guidelines for IEEE WG meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
 - Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
 - Don't discuss specific license rates, terms, or conditions.
 - Relative costs of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
 - Technical considerations remain the primary focus
 - Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
 - Don't discuss the status or substance of ongoing or threatened litigation.
 - Don't be silent if inappropriate topics are discussed ... do formally object.

For more details, see *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and *Antitrust and Competition Policy: What You Need to Know* at <http://standards.ieee.org/develop/policies/antitrust.pdf>

Patent-related information

The patent policy and the procedures used to execute that policy are documented in the:

- ***IEEE-SA Standards Board Bylaws***
(<http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6>)
- ***IEEE-SA Standards Board Operations Manual***
(<http://standards.ieee.org/develop/policies/opman/sect6.html#6.3>)

Material about the patent policy is available at
<http://standards.ieee.org/about/sasb/patcom/materials.html>

**If you have questions, contact the IEEE-SA
Standards Board Patent Committee
Administrator at patcom@ieee.org**