PSCC Subcommittee WebEx Virtual Meeting Minutes - DRAFT

Designation:	Name:
PSCCC-F0	IEEE Fiber Optics Subcommittee

Meeting Location:	Meeting Time:	Meeting Date:	Minutes Revised:	Minutes Approved:
WebEx	10 AM-1:00 PM-EDT	2020/09/23-24	2020/09/29	

Presiding Officer:	Recorded by:
Chair: Delavar Khomarlou, Vice Chair: Corrine Dimnik, Secretary (part-time): John Jones	John Jones, D. Khomarlou, Corrine Dimnik

Attendance: Total attendees = 22/30 (M: Member, CM: Corresponding Member, G: Guest, I: IEEE Representative)

Name	Affiliation	Attending via Phone (P) / Web (W) or Local (L)	M/CM/ G/I	Vote On IEEE 1138
Austin Farmer	AFL	W	M	Y
Jaclyn Whitehead	AFL	-	?	-
Mark Naylor	AFL	W	M	Y
Robert (Bob) Kluge	ATC - Retired	-	M	-
Mike Warntjes	ATC	W	M	Y
Mathew Lohry	ATC	W (first day only)	?	-
Corrine Dimnik	Kinectrics	W	M	Y
John Jones	PLP	W	M	Y
Josep Martin Regalado	Prysmian	W	M	Y
Jim Ryan	Prysmian	W	M	Y
Felix Chen	ZTT China	-	M	-
Jack Roughan	ZTT China	W	M	Y
Linda Cai	ZTT China	W	M	Y
Lemon Lu	ZTT China	W	M	Y
Rabih Ghossein	HPS	W	M	Y
Amnah Al-Jallad	HPS	W	M	Y
Gabriel Okafor	HPS	W	M	Y
Tewfik Schehade	Independent Consultant	W	M	Y
Delavar Khomarlou	Hydro One Networks	W	M	Y
Brett Boles	Southern Company	W	M	Y
Bruce Freimark	AEP	-	M	-
Christopher E. Royer	AEP	W	M	Y
Jordan Ellis	AEP	W	M	Y
Henson Toland	OFS Optics	W	M	Y
Mike Riddle	Incab	W	M	Y
Monty Tuominen	Bonneville Power - Retired	W	M	Y
Mike Kipness	IEEE	-	I	-
Denise Frey	Fiber Planners	-	M	-
Neal Murray	EPRI	W	G	Y

M: Member
CM: Corresponding Member
G: Guest

Item no.	Notes	Action by
CALL TO ORDER	September 23, 2020 10:00 AM	D. Khomarlou
INTRODUCTIONS AND QUORUM	Quorum With 22 members on WebEx, no IEEE representative in this meeting.	
CHAIR'S REMARKS	WebEx Meeting Welcome, COVID-19 situation, the need to have virtual meetings in place of the face-to-face meeting given the situation. IEEE SA Copyright policy for WG/subcommittee members was presented briefly. The Copyright presentation will be attached to these minutes for future reference. Bill Byrd IEEE Corrosion Paper by Bill Byrd will be attached to this document for your reference. Bill has been nominated for an Award from Parent Committee, but awards will be given in face-to-face meetings. Continue to use iMeetCentral as repository for our documents, BCC to all members acceptable for now in lieu of 123Signup setup. Within iMeetCentral, we want to change the space as follows: re-name the OPGW workspace to IEEE PSCCC-F0 space and create five (5) directories under there for each current standard as shown below: • Wrap • ADSS • OPGW • OPPC • Attachment Hardware/Fittings Corrine, John Jones and I will maintain mailing list for all members and can send documents/info if members need to send to the group. For privacy, group emails will be sent as Blind Carbon Copy (BCC).	D. Khomarlou
AGENDA APPROVAL	Agenda for the September 23-24 virtual meeting was sent to all members prior to the call. The agenda was approved by members on the call. Agenda Approval: Jim Ryan motioned, Second	D. Khomarlou
APPROVAL OF PREVIOUS MINUTES	Draft Minutes of the June 17 conference call have been sent to all members. Draft minutes are posted on iMeetCentral, but were not approved in this meeting due to time constraints. June 17, 2020 Minutes will be attached to this document and if there are no objections, we can consider it Approved.	D. Khomarlou

Item no.	Notes	Action by
IEEE 1138 on-going work on the draft	A marked up and clean (final) version of the IEEE 1138 was circulated to members few days prior to the meeting. Items from June 17, 2020 conference call were addressed in this meeting. DC resistance measurement test – allow alternative methods for DC resistance. Water Ingress – sample length would be 1 m to be consistent with IEC. A few other smaller editorial changes were made. Voting out and the revision. Mostly editorial changes. Corrine – Final changes include o List reviewed o DC resistance – Section 6.4.1.5 o Water Ingress test – Section 6.4.3.5 (1 m for 1 hr) Final revisions of IEEE 1138 and its edits brought on by Mandatory Editorial Review (MER) was voted on using roll call in the virtual meeting. Responses were recorded. There were no objections and we met the 2/3 approval of at least half of the members of subcommittee to move IEEE 1138 out of subcommittee and to Mandatory editorial review. Once IEEE 1138 has gone through mandatory editorial review, the process of creating a ballot pool in IEEE MyProjects would be required and the MyProject Ballot submittal process starts.	Corrine Dimnik/ IEEE 1138 WG
IEEE 1591.3 and 1594 Wrap Cable	Standard is in the IEEE process for review/publication, but IEEE processes seem to have bogged down. MyProjects shows as going for re-circulation which is not correct. Del/Corrine/Mark to follow-up.	Mark Naylor
IEEE 1595 Standard - 1595D3 OPPC	OPPC Standard: Went through the Draft September D5 document line-by-line. The smaller OPPC working group (ZTT, Prysmian, Tewfik, Corrine) had continued to work on the document since June conference call. There is an impasse on Section 4.1. Tewfik suggested that since this section is very similar to 1138, it can reference that section. Jack thought it was better to keep as is because it is a descriptive section and that this had been discussed and agreed upon before. No resolution could be found in the meeting. Action: ZTT (Jack) to send an email to chair on this section and we will circulate to members with a deadline to comment and email vote to chair/vice-chair. A decision based on the input from members is to be made before the December conference call. Other areas of discussion on 1595 OPPC standard and changes are documented at the end of this table under IEEE 1595 STANDARD – REVIEW – Linda CHANGES Captured by John Jones: Action: The 1595 group to work offline on the advanced draft (excluding section 4.1 which will be put to a subcommittee vote) and provide an updated version to chair/co-chair for dissemination to the group before December call with the goal of getting it voted out of subcommittee in the March 2021 meeting.	Josep Martin Linda Cai/ Jack Roughan

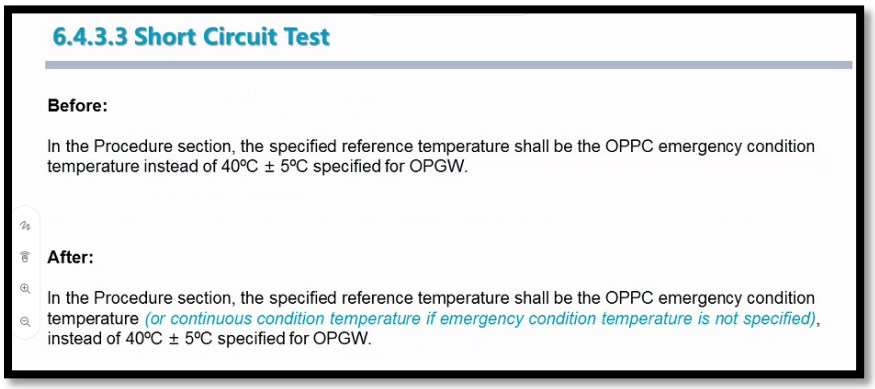
Item no.	Notes	Action by
OPPC Hardware 1591.4 (Jack Roughan (ZTT))	1591.4 OPPC Hardware Draft was discussed section-by-section and comments addressed. Very similar in nature to 1591.1 with the addition of isolators. References to 1591.1 throughout the doc where possible. Section 4: Added Corona protection Repair rods (repair devices) 4.2.2.7 – Closure. Tewfik suggested keeping the splice box separately from the isolator. Isolator may be included as part of this standard. May need to classify two different types of splice boxes. One that is mounted on the conductor, or one that is mounted on the tower with an isolator. For OPPC an insulator is required in either case. Reference the wrap hardware 1591.3 standard as required. Fault current specified I squared t. Repair rods - eliminated the high tension at high temp. Jack Roughan to send a draft version after the meeting. Will be send to members and further discussed in Dec. conference call. Aim to have it voted out in March 2021 meeting.	L. Cai/ J. Roughan/ Alex L.
IEEE 524 liaison	Not covered due to short time virtual meeting and the fact that we will need a new liaison if Bob Kluge is retired from committee.	NA
IEEE 525 and PSCCC E0 Liaison	Not covered due to short time virtual meeting	NA
IEC Liaison **ITU Liaison**	Not covered due to short time virtual meeting, except for Josep information on IEC splice enclosure standard.	NA
IEEE 1222	Publication through IEEE. Members are allowed a complimentary copy. No New update.	J. Ryan
1591.1 OPGW hardware	John jones went through the document section by section, covering Bob Kluge's comments. There are a number of comments that were addressed and a couple of others that require more work by John Jones. The follow up will be adding the Repair Device. Action: John to make changes and we will have a copy for the Dec conference call as well as March 2021 meeting. Hope to vote 1591.1 out of committee by March 2021. PAR is valid until Dec. 2021.	J. Jones/ B. Kluge
Sheave Size Recommendation/ IEEE 524	Del discussed Sheave Diameters Proposed Option 1 or Option 2 (attached document) based on Denise Fry work/contribution. Will be sent to all members for comments and placed in iMeetCentral.	

Item no.	Notes	Action by
New /Other Business Presentation by Monty Tuominen	Presentation by Monty Tuominen on transmission line fault current characteristics as related to OPGW (can also apply to OPPC). This presentation would include a descriptions of fault current offset (due to X/R ratio) and associated kA^2 values. Asymmetric value current amplitude can be twice as high as the symmetric. The excel spreadsheet (use at your own risk) developed by Monty and a Word document showing the theory behind the short circuit calculations (symmetric and asymmetric values) was provide to members courtesy of Monty. A PDF version of the presentation will be attached here. Asymmetrical short circuit may occur for 3 or 4 cycles so the relatively short period (60 cycles/sec) may make the mechanical less of an issue than the heat issue. Customers providing I2t are usually providing it for Asymmetrical cycles. Will need utility representatives to take a deeper look at how the results of this analysis could impact their short circuit calculations and choice of corresponding OPGW/OPPC sizes. Standard for splice Box - Still not sure how to approach this and whether a whole standard would be needed. Will need to discuss in subsequent meetings. Relevant IEC standards for closures and joint boxes provided by Josep are: IEC 60068-2-31 Free fall Test IEC 60529 Degree of tightness IEC 61300-2-1:2009 Fibre optic interconnecting devices and passive components - Basic test and measurement procedures • Part 2-1: Tests - Vibration (sinusoidal) • Part 2-4: Tests - Fibre or cable retention (axial tension test) • Part 2-5: Tests - Torsion • Part 2-6: Tests - Tensile strength of coupling mechanism • Part 2-7: Tests - Bending moment • Part 2-9: Tests - Shock • Part 2-10: Tests - Crush resistance • Part 2-11: Tests - Axial compression • Part 2-12: Tests – Impact • Part 2-21: Tests - Composite temperature/humidity cyclic test • Part 2-22: Tests – Temperature test • Part 2-23: Tests - Sealing for non-pressurized closures of fibre optic devices • Part 2-26: Tests - Salt mist • Part 2-28: Tests - Corrosive atmosphere (sulphur dioxide) • Part 2-33: Tests - Assembly and disassembly of fibre optic mechanical splices, fibre management systems and closures • Part 2-34: Tests - Resistance to solvents and contaminating fluids of interconnecting components and closures • Part 2-37: Tests - Cable bending for fibre optic closures • Part 2-38: Tests - Sealing for pressurized fibre optic closures • Part 2-42: Tests - Static side load for strain relief • Part 2-45: Tests - Durability test by water immersion • Part 2-46: Tests - Damp heat, cyclic • Part 2-47: Tests - Thermal shocks • Part 2-48: Tests - Temperature-humidity cycling • Part 2-54: Tests - Corrosive atmosphere (mixed gas) Part 2-56: Tests - Wind resistance of mounted housing	

Item no.	Notes	Action by
ITEMS REPORTED OUT OF EXECUTIVE SESSION	NA	
CLOSING	IEEE SA membership is encouraged but required only if voting in ballots.	
TIME OF FINAL ADJOURNMENT	September 24, 2020: 13:00 EDT	
NEXT MEETINGS	Next Meeting will be a virtual conference call: WebEx/WebEx: Wednesday, December 09, 2020 @ 11:00 EDT (1.5 – 2 hours)	
MATERIAL TO BE PLACED IN iMeetCentral **And** **Attached**	1. IEEE Copyright statement (included in this document) 2. IEEE Patent and duty to inform clause (included in this document) 3. Sheave size for ADSS/OPGW/OPPC proposed recommendation–WORD document for review/comment 4. IEEE 1138 (marked up and clean versions) 5. Monty Tuominen presentation (PDF) on short circuit calculation 6. IEEE 1591.1 OPGW hardware Latest draft 7. IEEE 1591.4 OPPC hardware latest draft 8. IEEE 1595 latest draft	

IEEE 1595 STANDARD – REVIEW – Linda

CHANGES Captured by John Jones:



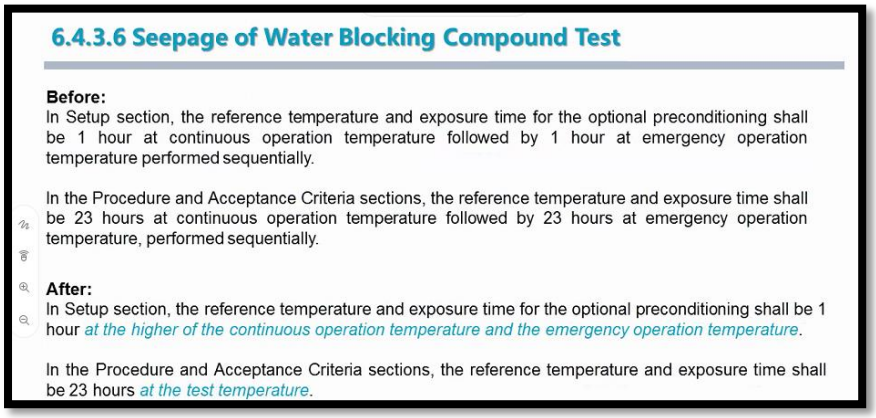
6.4.3.3 Short Circuit Test

Before:

In the Procedure section, the specified reference temperature shall be the OPPC emergency condition temperature instead of 40ºC ± 5ºC specified for OPGW.

After:

In the Procedure section, the specified reference temperature shall be the OPPC emergency condition temperature *(or continuous condition temperature if emergency condition temperature is not specified)*, instead of 40ºC ± 5ºC specified for OPGW.



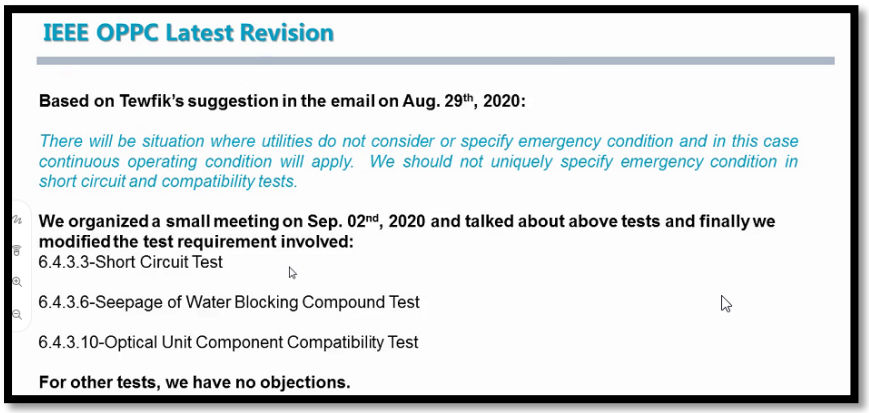
6.4.3.6 Seepage of Water Blocking Compound Test

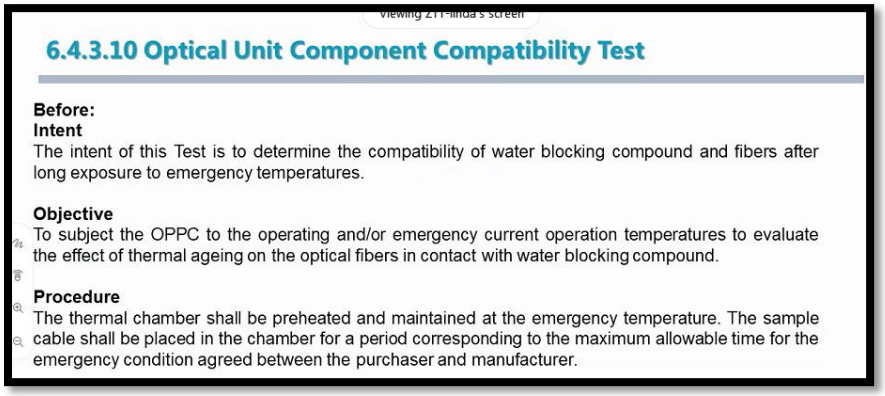
Before:
In Setup section, the reference temperature and exposure time for the optional preconditioning shall be 1 hour at continuous operation temperature followed by 1 hour at emergency operation temperature performed sequentially.

In the Procedure and Acceptance Criteria sections, the reference temperature and exposure time shall be 23 hours at continuous operation temperature followed by 23 hours at emergency operation temperature, performed sequentially.

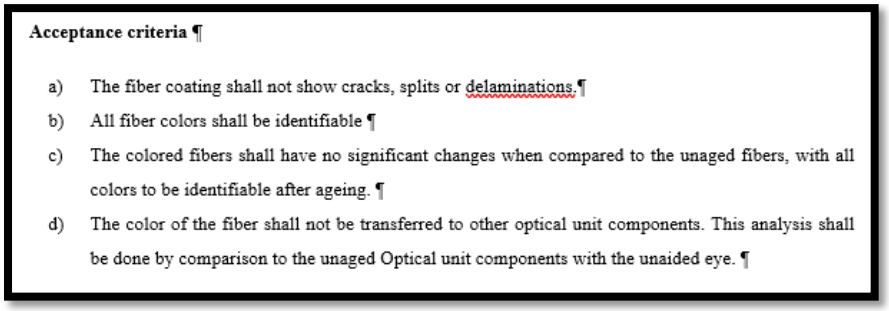
After:
In Setup section, the reference temperature and exposure time for the optional preconditioning shall be 1 hour *at the higher of the continuous operation temperature and the emergency operation temperature*.

In the Procedure and Acceptance Criteria sections, the reference temperature and exposure time shall be 23 hours *at the test temperature*.

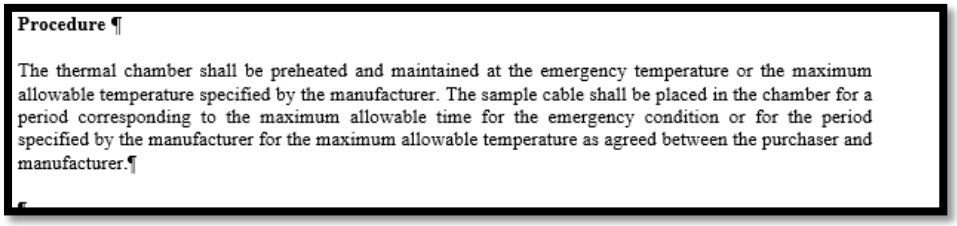




6.4 deletion of acceptance criteria item b. b was redundant.



QUESTION: Should there be a limit on the period for the procedure. Resolution is to include the specification in section 5.



MAINTENANCE SCHEDULE FOR STANDARDS UNDER PSCCC-F0

PRIORITY	DUE DATE	STANDARD NUMBER	STANDARD TITLE	LAST PUBLISHED DATE	ACTION (DEV / REVISION / COMMENTS ONLY	COMMENTS
1	New PAR submitted June 2024	IEEE-1138-2009	IEEE Standard for Testing and Performance for Optical Ground Wire (OPGW) for Use on Electric Utility Power Lines	2009	Voted out in September 23-24, 2020 meeting	PAR had expired in December 2019. New PAR with publication date in 2024 is approved Vote out of September 2020 Meeting
	Active PAR	IEEE 1222-2011	IEEE Standard for Testing and Performance for All-Dielectric Self-Supporting (ADSS) Fiber Optic Cable for Use on Electric Utility Power Lines	2011 New Version 2020	Published 2020	Published 2020
	Active PAR Exp. Dec 2021	IEEE 1594-2008	IEEE Standard for Helically Applied Fiber Optic Cable Systems (Wrap Cable) for Use on Overhead Utility Lines	2008		April 2020: Voted out of committee and to IEEE editors
	Active PAR Exp. Dec. 2021	IEEE 1595-DRAFT	Draft Standard for Testing and Performance for Optical Phase Conductor (OPPC) for Use on Electrical Utility Power Lines			Standard under development
	Active PAR Ex. Dec. 2022	IEEE 1591.1-2012	IEEE Standard for Testing and Performance of Hardware for Optical Ground Wire (OPGW)	2012		
	Active PAR Exp. Dec. 2021	IEEE 1591.3-2011	IEEE Standard for Qualifying Hardware for Helically-Applied Fiber Optic Cable Systems (WRAP Cable)	2011		April 2020: Voted out of committee and to IEEE editors
	PAR Approval May 2019 Exp. Dec. 2023	IEEE 1591.4-DRAFT	Standard for Testing and Performance of Hardware for Optical Fiber Composite Overhead Phase Conductor (OPPC)			Standard under development
		IEEE 1591.2-2017	IEEE Standard for Testing and Performance of Hardware for All-Dielectric Self-Supporting (ADSS) Fiber Optic Cable			
	Nor ours Published Date: Apr. 2017	IEEE 524-2016	IEEE Guide for the Installation of Overhead Transmission Line Conductors		For comment only	Liaison Report
		IEEE 525-2016	IEEE Guide for the Design and Installation of Cable		For comment only	Liaison Report

PRIORITY	DUE DATE	STANDARD NUMBER	STANDARD TITLE	LAST PUBLISHED DATE	ACTION (DEV / REVISION / COMMENTS ONLY	COMMENTS
			Systems in Substations			

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Participants, Patents, and Duty to Inform
All participants in this meeting have certain obligations under the IEEE-SA Patent Policy.

• Participants [**Note: Quoted text excerpted from IEEE-SA Standards Board Bylaws subclause 6.2**]: ○ "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

○ "Should inform the IEEE (or cause the IEEE to be informed)" of the identity of "any other holders of potential Essential Patent Claims" (that is, third parties that are not affiliated with the participant, with the participant's employer, or with anyone else that the participant is from or otherwise represents)

• The above does not apply if the patent claim is already the subject of an Accepted Letter of Assurance that applies to the proposed standard(s) under consideration by this group

- Early identification of holders of potential Essential Patent Claims is strongly encouraged
- No duty to perform a patent search

Patent Related Links
All participants should be familiar with their obligations under the IEEE-SA Policies & Procedures for standards development. Patent Policy is stated in these sources:

- IEEE-SA Standards Boards Bylaws (Clause 6) http://standards.ieee.org/develop/policies/bylaws/sect6-7.html
- IEEE-SA Standards Board Operations Manual (Clause 6.3) http://standards.ieee.org/develop/policies/opman/sect6.html
- 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 or visit" http://standards.ieee.org/about/sasb/patcom/index.html
This patent information (slide set) is available at: https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.ppt

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 (LOA): • Either speak up now, 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
Cause an LOA to be submitted

Don't discuss the interpretation, validity, or essentiality of patents/patent claims.

Don't discuss specific license rates, terms, or conditions. • Relative costs, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings. • Technical considerations remain 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.

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All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.

See *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and "Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy" for more details.

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