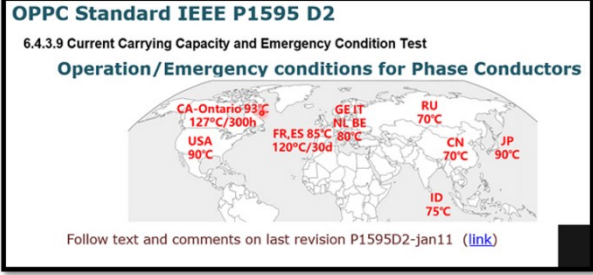


<b>PSCC Subcommittee Skype Meeting Minutes - FINAL</b>				
Designation: PSCCC-F0	Name: IEEE Fiber Optics Subcommittee			
Meeting Location: Skype	Meeting Time: 10-12:30 EDT	Meeting Date: 2020/04/01-02	Minutes Revised: 2020/04/08	Minutes Approved: 2020/06/17
Presiding Officer: Chair: Delavar Khomarlou, Vice Chair: Corrine Dimnik, Secretary: Vacant		Recorded by: Delavar Khomarlou /John Jones		
Attendance:				
Name	Affiliation	Attending via Phone (P) / M/CM/ Web (W) or G		
Austin Farmer	AFL	W		
Jaclyn Whitehead	AFL	W		
Mark Naylor	AFL	W		
Robert (Bob) Kluge	ATC - Retired	W		
Mike Warntjes	ATC	W		
Mathew Lohry	ATC	W		
Corrine Dimnik	Kinectrics	W		
John Jones	PLP	W		
Martin Regalado	Prysmian	W		
Jim Ryan	Prysmian	W		
Felix Chen	ZTT China	W		
Jack Roughan	ZTT China	W		
Linda Cai	ZTT China	W		
Christopher E. Royer	AEP	W		
Rabih Ghossein	HPS	W		
Amnah Al-Jallad	HPS	W		
Gabriel Okafor	HPS	W		
Tewfik Schehade	Independent Consultant	W		
Delavar Khomarlou	Hydro One Networks	W		
Brett Boles	Southern Company	W		
Bruce Freimark	AEP	W		
Jordan Ellis	AEP	W		
Henson Toland	OFS Optics	W		
Mike Riddle	Incab	W		
Monty Tuominen	Bonneville Power - Retired	W		
M: Member CM: Corresponding Member G: Guest				

Item no.	Notes	Action by
<b>CALL TO ORDER</b>	April 1, 2020: 10:00 AM	D. Khomarlou
<b>INTRODUCTIONS AND QUORUM</b>	Quorum With 25 members on the Skype	

Item no.	Notes	Action by
<b>CHAIR'S REMARKS</b>	<p>Skype Meeting Welcome, COVID-19 situation, the need to have virtual meetings for the time being given the situation and being flexible for future meetings.</p> <p>IEEE SA Copyright policy for WG/subcommittee members was presented. The Copyright presentation will be attached to these minutes for future reference.</p> <p>Once it is setup, our parent committee expects our communications to be via 123signup. We are not setup yet.</p> <p>Continue to use iMeetCentral as repository for our documents.</p> <p>As part of the 123signup, the parent committee A0 would like to see PSCCC-F0 organized into working groups, with chairs and vice-chairs for each working group. I have created a list which has each person as member of several working groups. This will be updated and shared with members. The assignments, however, are not rigid. Contribution and participation is always encouraged.</p>	D. Khomarlou
<b>AGENDA APPROVAL</b>	Agenda for the Conference call was sent to all members prior to the call. The agenda was approved by members on the call.	D. Khomarlou
<b>APPROVAL OF PREVIOUS MINUTES</b>	Draft Minutes of the December 2019 conference call had been sent to all members. Draft minutes will be posted and we can approve it in the June conference call.	D. Khomarlou
<b>IEEE 1138 on-going work on the draft</b>	<p>Summary of Discussions on both April 1 and April 2, 2020: IEEE 1138 was given special consideration because of PAR expiry in December 2020. <b>Subsequent to the meeting, Chair created new PAR (IEEE 1138-2021) with a publication date of 2021.</b></p> <p>Discussion and point-by-point comment resolution of IEEE 1138 final draft document. Document was sent to group prior to the meeting.</p> <p>B. Freimark comment on the use of NESC in the document vs. what we currently have. In 1138 draft, we say “applicable regional and national code”. Bruce is suggesting we change to “National Electrical Code (NESC) or other document specified by governing authority for the design of overhead electrical system.” D. Khomarlou will take to IEEE to discuss if we should allow inclusion of NESC due to its widespread use e.g. in Canada and South America.</p> <p><b>IEEE has stated that they prefer standard to be internationally applicable, but have no issue if we include NESC. Want members to vote on this and make the final decision.</b></p> <p>Definition MRDT – T. Schehade to edit and present tomorrow. Submitted and approved.</p> <p>Changed Table 2: Minimum fibers for test: the fiber splices necessary to monitor - Changes approved.</p> <p>Lightning: All the changes made in the lightning subgroup were accepted.</p> <p>Seepage and Flooding: Made it so that it lines up with EIA standard.</p> <p>Word “supplier” or “manufacturer” throughout the document used interchangeably. Use “supplier”.</p> <p>Action: C. Dimnik will circulate a clean copy after comment on NESC is resolved and MRDT definition is included. Will vote out of the committee in June meeting for balloting.</p>	Corrine Dimnik/ IEEE 1138 WG

Item no.	Notes	Action by
<p><b>IEEE 1591.3 and 1594 Wrap Cable</b></p>	<p>M. Naylor</p> <p>1591.3 and 1594 re-ballot is complete (limited to issues raised and sections modified only). Mark has worked with IEEE for clarifications.</p> <p>Mark provided presentation on changes made.</p> <p>Wind loading – Agreed test not required as it is covered by tensile loading.</p> <p>Check title of the document to match PAR title.</p> <p>Completed – Vote out of committee on April 2, 2020.</p> <p>Action: M. Naylor to send to Michele Turner (IEEE) for editorial and to complete the process towards publication.</p>	<p>Mark Naylor</p>

Item no.	Notes	Action by
<p><b>IEEE 1595 Standard - 1595D3 OPPC</b></p>	<p>Thermal rating of power conductors during Normal, long-term (50 hr/yr) and short-term emergency (15 minutes) which OPPC must also support were discussed. D. Khomarlou provided unofficial values for Hydro One and Joseph provided the following global view which is based on an IEC presentation.</p>  <p>The presentation on changes to 1595 (presented by J. Martin, but developed jointly between Prysmian and ZTT) will be attached to these minutes.</p> <p>Some highlights of discussion are:</p> <p>Section 6.4: Qualification test table is a very useful reference.</p> <p>MRDT test –</p> <p>6.4.1.3 – reference “inner edge” for dead-end  Sheave Diameter test – delete the paragraph referencing the sheave diameter. Define “free cable length”. In 1138, this is called “length within fittings”. Decided that we will call “length between inner edges of dead-ends (free cable length)”.</p> <p>6.4.2.0 Sheave sizes requested 38-42 x OD of OPPC and 48-52 x OD for trapezoidal wire. To be reviewed based on IEEE 524 which requires 20xOD</p> <p>6.4.3.3 – OPPC has been known to have bird caging. Length of sample and injection point is difficult to determine. A subcommittee can review this and return to the group with recommendations.  Lightning test approved.</p> <p>6.4.3.4 Lightning – Not mandatory for OPPC, if no shieldwire on line, then OPPC may be subjected to lightning. Considered in-service electrical/mechanical test.</p> <p>6.4.3.6 Seepage test approved (similar to IEEE 1138 except temperature: 1 hr soak @65 °C, 23 hr test @65 °C).</p> <p>6.4.3.9 Current Carrying and Emergency Condition Test. Consider IEEE ampacity test. Fiber limitations in OPGW.</p> <p>Discussion parked – Current carrying test for characteristic lab testing.  Emergency Condition test – aging test and limits established between manufacturer and customer. Remove limitation of 85 °C – To a maximum acceptable value between customer and supplier.  OPPC group to work off line.</p> <p>Normative references to match IEC 60794-4-30. List will be short</p> <p>IEEE 1595 OPPC Revision Excel spreadsheet was presented by L. Cai</p> <p>6.4.3.9 – Emergency condition – may be difficult to design test structure. Separating electrical test and compatibility test.</p> <p>Emergency Condition test – aging test and limits established between manufacturer and customer.</p> <p>T. Schehade and J. Martin to work off line.</p> <p>Will provide an updated version for the June conference call.</p>	<p>Joseph Martin  Linda Cai/  Jack Roughan</p>

Item no.	Notes	Action by
<p><b>OPPC Hardware 1591.4 (Jack Roughan (ZTT))</b></p>	<p>1591.4 was discussed briefly due to time constraints.</p> <p>A draft document was sent to Corrine prior to the meeting. It will be re-circulated within the group and placed in iMeetCentral. Comments sought. Written using the same template as 1591.1 OPGW.</p> <p>RIV /Corona – may be harmonized with Wrap standard.</p> <p>Corona can reference IEC 61284.</p> <p>Should include Isolator/transition devices which isolate power component from fiber.</p> <p>Action: Work on the standard will continue with presentation of progress in June meeting.</p>	<p>L. Cai/ J. Roughan</p>
<p><b>IEEE 524 liaison</b></p>	<p>Not covered due to short time virtual meeting</p>	<p>NA</p>
<p><b>IEEE 525 and PSCCC- E0 Liaison</b></p>	<p>Not covered due to short time virtual meeting</p>	<p>NA</p>
<p><b>IEC Liaison ITU Liaison</b></p>	<p>Not covered due to short time virtual meeting</p>	<p>NA</p>
<p><b>IEEE 1222</b></p>	<p>Publication through IEEE. Members are allowed a complimentary copy.</p>	<p>J. Ryan</p>
<p>1591.1 OPGW hardware</p>	<p>Not covered due to short time virtual meeting</p>	<p>J. Jones/ B. Kluge</p>
<p><b>New Business</b></p>	<p>The following are placed here for reference only. These were not discussed in detail due to time constraints and virtual meeting.</p> <p>Sheave size recommendation and presentation</p> <p>Not covered due to short time virtual meeting</p> <p>Denise Fry could not make the meeting. She had requested manufacturers for their comprehensive recommendations following September 2019 meeting.</p> <p>Prior to the conference call in December 2019, she let chair know that she didn't receive any recommendation from any manufacturers.</p> <p>Manufactures: Incab, Prysmian, AFL, SFPOC, PLP please provide recommendation to Denise. Denise will put her original presentation on iMeetCentral if she can.</p> <p>Standard for splice Box - Still not sure how to approach this and whether a whole standard would be needed or it could be an addendum to an existing standard. Will discuss further in April meeting.</p>	<p>D. Khomarlou</p>
<p><b>ITEMS REPORTED OUT OF EXECUTIVE SESSION</b></p>	<p>NA</p>	
<p><b>CLOSING</b></p>	<p>VOTE 1591.3 WRAP – This was voted out to publication.</p> <p>VOTE 1138 scheduled to vote at next conference call in June pending NESC resolution and MRDT revision.</p> <p>IEEE membership is required for PSCCC-F0. IEEE SA membership is encouraged but required only if voting in ballots.</p>	
<p><b>TIME OF FINAL ADJOURNMENT</b></p>	<p>April 2, 2020: 12:50 EDT</p>	

Item no.	Notes	Action by
<b>NEXT MEETINGS</b>	Next Conference call: Skype: June 17, 2020 @ 11:00 AM EDT Duration: 1.5 hour  Will decide on the date and location for the next face-to-face meeting based on COVID-19 pandemic news.	
<b>MATERIAL TO BE INCLUDED</b>	<ol style="list-style-type: none"> <li>1. IEEE Copyright policy presentation</li> <li>2. IEEE Patent and duty to inform clause</li> <li>3. Copy of IEEE 1595</li> <li>4. IEEE 1138 (marked up and clean versions)</li> <li>5. List of IEC standards from Mark Naylor</li> </ol>	

## 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 Dec. 2021	IEEE-1138-2009	IEEE Standard for Testing and Performance for Optical Ground Wire (OPGW) for Use on Electric Utility Power Lines	2009	Ready to be voted out in June 2020 conference call.	PAR had expired in December 2019. New Par with publication date Dec 2021 submitted. Vote out of June 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?	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?	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?	IEEE 1591.1-2012	IEEE Standard for Testing and Performance of Hardware for Optical Ground Wire (OPGW)	2012		
	Active PAR?	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	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			
	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 Systems in Substations		For comment only	Liaison Report

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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](mailto: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.

### Other Guidelines for IEEE Meetings

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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