RODE C37.68 Controls Working Group Meeting Minutes

April 24, 2018 – Orlando, Florida

Chair: Paul Found **Vice-Chair**: Karla Trost

Meeting Minutes

1. Call to Order Paul Found

The meeting was called to order at 2:03 PM.

2. 6.3.2 Call for Patents Paul Found

No patents were disclosed.

3. Introduction of Members and Guests

Self-introductions were made of the attendees.

4. Attendance and Quorum Check Karla Trost

Sign-in sheets were circulated. Quorum was verified.
There were 29 people in attendance, 10 were members.
Four new members were added: Anil Dhawan, Brendan Kirkpatrick, Tim Royster, and Stephen Pell.

5. Approval of Agenda Paul Found

No changes were requested.

6. Approval of Previous Minutes Paul Found

http://www.ewh.ieee.org/soc/pes/switchgear/minutes/2017-2/F17RODEa3REV0.pdf

Ian Rokser made a motioned to accept the minutes, Travis Johnson seconded. The minutes were approved.

7. Review Action Items Paul Found

- Draft outline of standard clauses and include specific guides within key sections
  - See the attached powerpoint for details.
- There was an additional action item to reach out to the relay group. Paul has contacted the IEEE PSRC secretary.

8. New Items

- Paul reviewed our IEEE Central desktop for file storage. (imeetcentral)
- The task worksheets that the action item team created were explained. These could be used for the next steps. There are two possible actions –

1. Proposed Action 1: For Chapters 2 & 3 *(ideal for smaller volunteer numbers, better to concentrate the efforts)*

    1. Review each subclause item in relation to the Controls TF Report.
    2. Develop in point form(a) requirements, (b) the method of verifying the requirement.
    Method of demonstrating compliance may be through reference to other recognized standards, or by inserting proposed test requirements.
    3. Insert the draft clause into the draft document standard.
    4. F2018 will need to repeat same exercise for chapters 4 & 6, S2019 Chapters 7,8, & 9.

2. Proposed Action 2: For Chapters 2-9 *(ideal if the members feel they can handle the workload)*

    1. Review each subclause item in relation to the Controls TF Report.
    2. Develop in point form (a) requirements, (b) the method of verifying the requirement.
    3. Do not form draft clause wording onto the standard.
    4. Drafting the clauses will be done in F2018-S2019.

3. Discussion occurred as noted:
    - There are benefits to proposal 1 - it may be easier to get started if we focus on a section of the document vs the whole document. This will also allow for lessons learned on creating the normative requirements to be shared to the future work.
    - It was noted that the second proposal may take longer to draft so the final date would probably be the same.
    - The proposed sections were grouped numerically (based on the report layout), we can change that if it makes sense to group them separately.
        - 2 (Environmental Factors)
        - 3 (Mechanical Factors)
        - 4 (Electrical Factors)
        - 6 (Hardware interface considerations and testing)
        - 7 (Firmware/Software consideration)
        - 8 (System considerations)
        - 9 (Other)
    - A question was asked about the format of the standard. The two draft structure proposals from the October meeting were reviewed.
        - A proposal was made that a table be included after the description of each application. The table would define what tests are needed for each application and if necessary, the class or severity for each test.
        - In discussion, controls integrated within the switchgear device were brought to the table. This application (for both pole, pad, and vault style) was not specifically considered in the PAR, but is not excluded in the PAR. Controls may also be mounted outside of the

primary enclosure, either on or off of the primary enclosure. These applications should also be included.

- Discussion was held about what is included in the description of "control" in this PAR. Can this standard define the rating of the enclosure? If testing for temperature, does it include everything including the enclosure?
  - Consensus was that this standard should include the requirements for the control in the enclosure (full system).
  - If the standard defines a specific design test requirement and something is done differently inside of the cabinet to impact (for example) the temperature – what does that do to the design test requirement?
  - If there are multiple "enclosures" that make up the control, what is included in this standard's definition of a control?
  - We need to create the definition of a "control". Two categories, a relay purchased and put into an enclosure and a control that is developed from the ground up.

- The action items include:
  1. A group will write the definition of a control (keeping in mind the scope of C37.75 for equipment enclosures). Chair will lead. Anil Dhawan, Kate Cummings, Craig Thompson, and Ian Rokser will assist.
  2. Discussion occurred that applications for pole, pad, and vault style controls may also be mounted outside of the primary enclosure, either on or off of the primary enclosure.

     The groups as a whole will review the technical report material sections and divide it into application specific sections. Chair will send out the list of items to all members/guests and each person to indicate which applications apply. Tim Royster will combine the results. Applications to include inside/outside mounting for the following applications:
     - Pole mounted and Pole Integrated
     - Pad-mounted (LVE, Pedestal, in HVE, in device)
     - Vault (in vault, in device, pedestal)
  3. Once item 2 is completed, the outline would be divided up to come up with the list of test requirements for each chapter before the fall meeting. The teams are listed below
     - Report section 2 – Tim Royster, Craig Thompson, Anil Dhawan
     - Report section 3 – Craig Thompson, Ian Rokser, Brad Lewis, Travis Johnson
     - Report section 4 –Karla Trost, Mark Feltis, Bob Behl, William Hurst, Ian Rokser, Brendan Kirkpatrick
     - Report section 6 – Kate Cummings, Mark Feltis, Brendan Kirkpatrick, Paul Found

9. Next Steps

- Project Milestones

- ~~Draft outline of standard clauses and include specific guides within key sections: Spring 218~~

These would change the milestones:

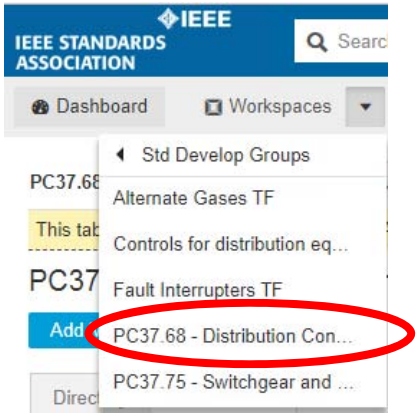
- Control Definition, Test Requirements by Application, and Initial list of requirements Fall 2018
- Draft verbiage/ tests: Spring and Fall 2019
- Compile initial ballot draft: Spring 2020
- Draft for Initial Sponsor Ballot: December 2020

10. Next meeting:

- The next working group meeting will take place at the Fall Switchgear Committee Meeting the week of October 14th, 2018 in Kansas City, MO.

11. Adjournment The meeting was adjourned at 3:50pm.

Reminder – Group Information is available at:
https://ieee-sa.imeetcentral.com/login



If you do not have access, please let Karla know.

Annex: Attendance

Role	First Name	Last Name	Company	04/24/2018
Guest	Edwin	Almeida	Southern California Edison	X
Guest	Antone	Bonner	PAS Consulting	X
Guest	Krystle	Carstens	Thomas & Betts	X
Member	Katherine	Cummings	G&W Electric	X
Member	Anil	Dhawan	ComEd	X
Member	William	Ernst	Thomas & Betts	X
Member	Mark	Feltis	Schweitzer Engineering Laboratories, Inc	X
Chair	Paul	Found	BC Hydro	X
Guest	Jeffrey	Gieger	Thomas & Betts	X
Guest	Peter	Glaesman	PCORE Electric Company, Inc.	X
Guest	Harold	Hirz	Thomas and Betts	X
Member	Travis	Johnson	Xcel Energy	X
Member	Brendan	Kirkpatrick	Southern California Edison	X
Member	Frank	Lambert	Georgia Tech / NEETRAC	X
Guest	Bradley	Lewis	AEP	X
Guest	Donald	Martin	G&W Electric Co.	X
Member	Peter	Meyer	S&C Electric Company	X
Guest	Jacob	Midkiff	Dominion Energy	X
Member	Stephen	Pell	Siemens	X
Guest	Al	Pruitt	The Durham Company	X
Guest	Caryn	Riley	Georgia Tech/NEETRAC	X
Member	Ian	Rokser	Eaton Corp	X
Member	Timothy	Royster	Dominion Virginia Power	X
Member	Francois	Soulard	Hydro-Quebec	X
Guest	Craig	Thompson	SEL	X
Vice-Chair	Karla	Trost	G&W Electric	X
Guest	Bruce	Venne	Rockwell Automation	X
Guest	Michael	Whitney	S&C Electric Company	X
Guest	robert	wolf	Hubbell Power Systems, Inc.	X
Member	Jeffrey	Golarz	IntelliSAW	
Member	Jennifer	Hunter	MEPPI	
Member	Benson	Lo	Toronto Hydro	
Member	Nenad	Uzelac	G&W Electric	

Annex: Presentation (following)

IEEE C37.68
Distribution Controls Working Group

April 24, 2018

Progress (S18 updated)

- Last IEEE C67.60 meeting Approach 2 was selected.
- Dec & Jan Webexes completed the draft outline.

Review Action Item 1

> Draft outline of standard clauses and include specific guides within key sections

		Include						Exclude						Annex				
		PF	KT	NU	IR	TJ		PF	KT	NU	IR	TJ			PFComment	KTComment	Jan 29 webex	Jan 31 Webex
2.7	Degradation over time							X	X									
2.8	Special considerations for storage	X	X												noted to have this NOT included.			
2.9	Field tests and in-service monitoring							X		X	X	X	X		PF Jan18: largely QA inspection in nature - USER controlled			
2.9.1	Inspection upon receipt & prior to installation							X										
2.9.2	Monitoring and in-service							X										
3	**Mechanical factors**	**X**	**X**	**X**	**X**	**X**											be include. Locate the correct industry standard to cover these requirements. Applies to entire control & cabinet, not just individual	

Review Action Items 1

> The task force created task sheets to summarize and position for next steps.

Task:	1. Review each subclause item in relation to the Controls TF Report.			
	2. Develop standard requirements to state (a) the requirement, (b) the method of verifying the requirement.			
	Method of demonstrating compliance may be through reference to other recognized standards, or by inserting proposed test requirements.			
	3. Insert the draft clause into the draft document standard.			
Deliverable:	Revised draft ready for Fall 2018 meeting review.			
		Incl.	Excl.	**Consolidated comments since F2017 Mtg**
3	**Mechanical factors**	X		All agree section 3 to be include. Locate the correct industry standard to cover these requirements. Applies to entire control & cabinet, not just individual components.
3.1	Introduction	X		
3.2	Relevant mechanical considerations of control components (a listing of the parts of a control)	X		
3.3	Sources of shock and vibration	X		Must be designed to withstand. There are external mechanical stds to refer to here.

Review Action Item 2

“Should we reach out to the relay group (37.90, and others?) Yes, we need to reach out.

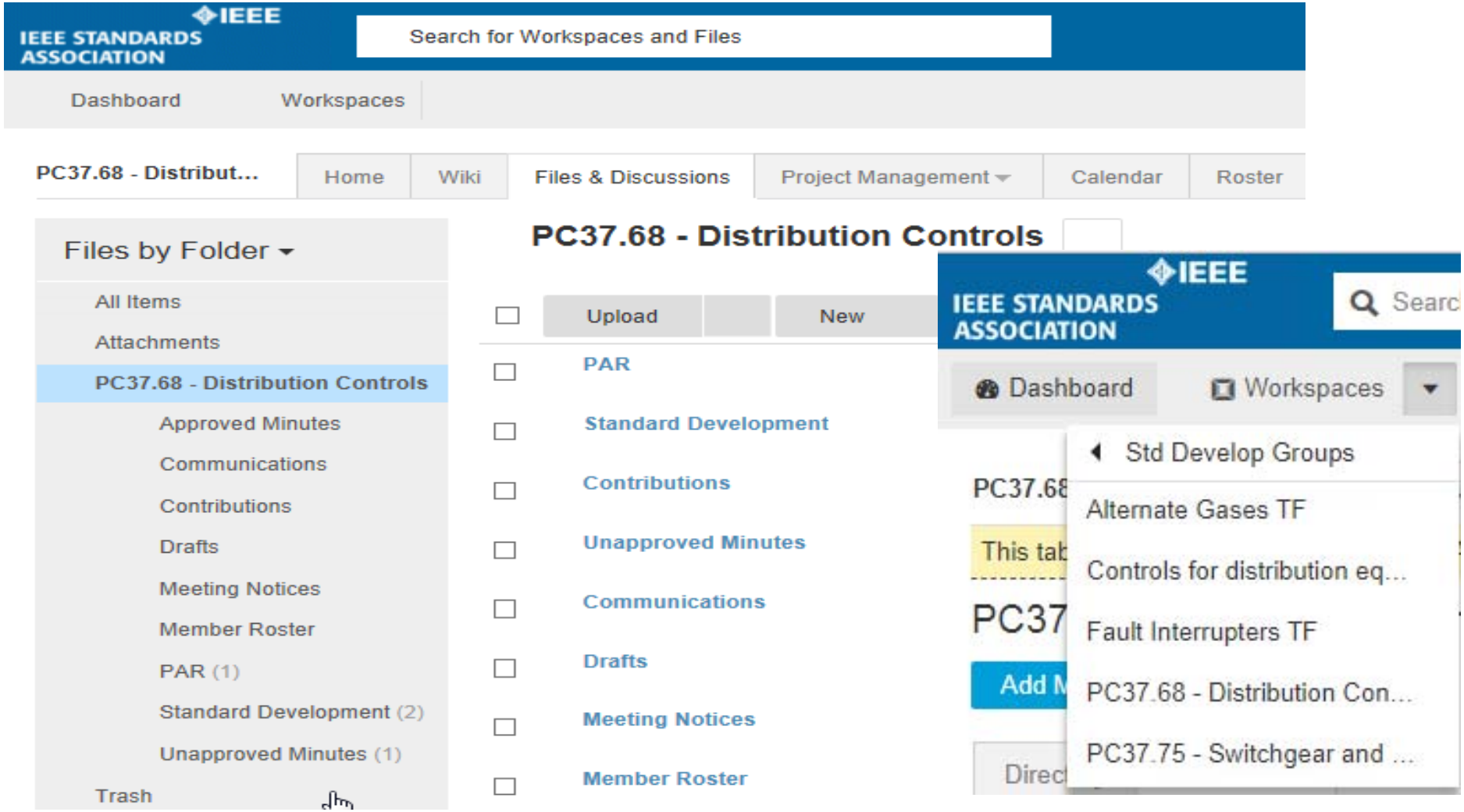
There is one standard that may overlap that we just learned about.”

> Chair made contact with IEEE-Power System Relay and Control Secretary (Pratap Mysore).

- Erin is attending IEEE-PSRC meeting in May - will assist then if needed.

Next Steps

https://ieee-sa.imeetcentral.com/login/



Proposal 1 vs 2

S18-F18	F18-S19	S19-F19	F19-S20
2 & 3 draft	4 & 6 draft	7, 8 & 9 draft	full draft

S18-F18	F18-S19	S19-F19
2 & 3 pt.	draft	
4 & 6 pt.	draft	full draft review
7, 8 & 9 pt.	draft	

Next Steps

> Review of existing information in comparison to the outline: **Due Fall 2018**

Proposed Action 1: For Chapters 2 & 3 *(ideal for smaller volunteer numbers, better to concentrate the efforts)*

1. Review each subclause item in relation to the Controls TF Report.
2. Develop in point form(a) requirements, (b) the method of verifying the requirement.
   Method of demonstrating compliance may be through reference to other recognized standards, or by inserting proposed test requirements.
3. Insert the draft clause into the draft document standard.
4. F2018 will need to repeat same exercise for chapters 4 & 6, S2019 Chapters 7,8, & 9.

Next Steps

> Review of existing information in comparison to the outline: **Due Fall 2018**

Proposed Action 2: For Chapters 2-9 *(ideal if the members feel they can handle the workload)*

1. Review each subclause item in relation to the Controls TF Report.
2. Develop in point form (a) requirements, (b) the method of verifying the requirement.
3. Do not form draft clause wording onto the standard.
4. Drafting the clauses will be done in F2018-S2019.

Next Steps

> Review of existing information in comparison to the outline: **Due Fall 2018**

- These would change the milestones:
  - Review gaps: ~~Spring 2019~~ Fall 2018
  - Draft verbiage/ tests to cover the gaps: Spring ~~2020~~ 2019
  - Compile initial ballot draft: ~~Fall~~ Spring 2020
- Draft for Initial Sponsor Ballot: December, 2020