

**IEEE Distribution Subcommittee
Meeting Minutes
January 14, 2015
Garden Grove, CAD**

ADMINISTRATIVE

Chair Julio Romero Aguero called the IEEE Distribution Subcommittee meeting to order at 1:35 p.m. with 17 members and 8 guests present. Introductions were the first order of business followed by approval of the 2014 Summer Meeting minutes. Two corrections were suggested and a motion to accept the amended minutes was made by Larry Clark, Seconded by Mani Venkata and vote to approve was passed.

CHAIR REPORT – John McDaniel, *Distribution Subcommittee*

There are also a number of initiatives coming from Tech Council. One that will directly affect us is a proposed restructuring of the PES Committees. There is a Task Force looking at this restructuring. The re-structuring was presented at a Tech Council retreat this past November. At the moment, there is no direct impact on the Distribution SC. But, there was a proposal to move all DMS functions into the new Power Systems Planning and Operations Committee. For now, the DMS TF will remain within the Smart Distribution WG, as long as they keep their scope to just the portions of DMS that deal with Distribution Automation. If the scope expands, then it would be moved over to the PSPO Committee. There was also the suggestion that the Smart Distribution WG name revert back to the Distribution Automation WG. This is because there will be a new Smart Loads/Buildings Committee and Tech Council did not want any confusion/overlap with committee names.

Other portions of the restructuring that will impact the T&D Committee are: The General Systems SC, minus the Lightning WG, will be move to the “Analytics” Committee (the official name has not been agreed to), the Integration of Renewables SC will be moved to the Energy Development Committee, the HVDC/FACTS SC is proposed to be moved to the Substations Committee, and it is proposed that the Power Systems Instrumentation and Measurement Committee be moved into the T&D Committee as a subcommittee.

VICE CHAIR REPORT – Julio Romero Aguero, *Distribution Subcommittee*

I have been serving as Editor of IEEE Transactions on Power Delivery (TPWRD), assisting the Editor-in-Chief, Prof. Wilsun Xu from University of Alberta, in the review of distribution related papers. I have been involving several of our distribution subcommittee members in these reviews, as well as other colleagues. Prof. Xu has been promoting several initiatives to improve the journal’s impact factor, this include the release of several Calls for Papers for Special Issues, information available here <http://www.ieee-pes.org/calls-for-transactions>. I volunteered to be the Guest Editor-in-Chief of the following special issue, due date for submission of abstracts is January 31, 2015:

- Protection and Real-Time Monitoring of Transmission and Distribution Systems with High Penetration of Distributed Generation and Microgrids

<http://www.ieee-pes.org/images/pdf/calls-for-transactions/Special%20Edition%20of%20IEEE%20Transactions%20PD-DER-Protection-SubmissionChange.pdf>

- Guest Editorial Board
 - Walmir Freitas, University of Campinas (UNICAMP), Brazil
 - Solveig Ward, Quanta Technology, USA
 - Robert Uluski, UISOL, USA
 - Fred Friend, American Electric Power (AEP), USA

I have been serving as Editor of IEEE Transactions on Smart Grid (TSG), assisting the Editor-in-Chief, Prof. Mohammad Shahidehpour from Illinois Institute of Technology, in the review of papers pertaining to smart grid applications in distribution. Prof. Shahidehpour has completed his term as Editor-in-Chief, Dr. Jianhui Wang from Argonne National Laboratory has been appointed as new Editor-in-Chief, effective January 1, 2015.

Shay Bahramirad was nominated for the Distribution SC Vice Chair by Julio Romero Aguero. Mani Venkata moved to elect. John McDaniel seconded the motion and the group voted Shay in as Vice Chair.

WORKING GROUP REPORTS

DISTRIBUTION RELIABILITY – Rodney Robinson, Chair

Rodney Robinson, chair called the WG meeting to order at 3:00 PM with 38 attendees. The 2014 Summer Meeting minutes reviewed and accepted with one modification.

Note: All presentations given at the Work Group and Task Force meetings are available on the WG and TF websites.

Task Force on Predictive Reliability – Julio Romero-Aguero/Le Xu

Chair Julio Romero Aguero Julio reviewed the scope of the TF. Julio's presentation can be found on the web. A white paper to summarize survey results is being written. The hope is to present it at the Denver meeting. A sign-up sheet was distributed and five WG members volunteered.

Task Force on Reliability Indices (1366) – John McDaniel

The Guide was approved in 2012 and has a 10 year life. This TF is waiting on outputs from several of the other Task Forces to see if there are any updates to 1366 that will come from them. John will probably take a PAR out in 2017/2018 to "revise" the Guide. Ballot will need to be completed by 2022.

Task Force on Reliability Reporting – Rodney Robinson/Val Werner

Val Werner asked the WG for ideas for the next update of the 1782 guide. He requested that WG members send him an email by the end of February for any changes, updates or additions that members would like to work on or suggest. Dave Lankutis suggested that some of the work of the Cost & Funding TF could be added to the guide.

Tools Task Force – Tyler Jones

Heide Caswell suggested that since Ian Hoogendam had left the position, that Tyler Jones is willing to be the new chair and is familiar with Ian's work on the TF. There were no objections from the WG. Any member wishing to be on the Tools TF can contact Tyler Jones.

Task Force on Data Analysis and Benchmarking – Heide Caswell

Heide Caswell discussed the following items for the Data Analysis TF:

- Continued question for major event response metric (based on EPRI input, as well as northeast regulator inquiry)
- Opportunity to consider how LBNL drivers (as discussed at General Meeting) could be incorporated into study
- Distribution interruption metrics
- More assessment of trends
- Major event trends (study conducted as a sub-activity by LBNL and Data Analysis sub-team)

Heide Caswell discussed the following items for the Benchmarking TF:

- Incorporated Source Exclusion (WOF) outage calculation process
- Incorporated Planned Exclusion (WOP) outage calculation process
- Developed more structured routing process for Working Group members and Participants
- Benchmarking Process Flowchart
- Proposed 2015 Schedule
- Areas to Be Aware of
- Recommendations
- Recent Opportunities for Data and Its Application
-

Joe Eto gave a presentation: *Examination of Trends in Major Events Days(MED) over Time, Considering the IEEE Benchmark Survey and Aspect of Std. 1366*

Cost/Funding Task Force – Dave Lankutis

Dave Lankutis gave a presentation: *Sharing the Responsibility of Power Reliability and Power Quality*

Dave Lankutis accepted Chair of the Cost/Funding Task Force. A signup sheet was distributed and nine WG members volunteered. Dave will arrange for a web conference.

NRECA Benchmarking – Tony Thomas

Tony discussed the data collection history since Tony began leading to the development of PwrMetrix by Alvin Razon. Tony stated that members who have used it see the value.

Panel Sessions Discussion

The only panel session to be presented from the DRWG at the Summer General Meeting in Denver 2015 is *Protective Device Placement*, Fred Friend Moderator. The other two panel sessions *Extreme Events*, Heide Caswell Moderator and *Best Practices- Top Quartile Companies*

for Reliability, John Helm Moderator will be presented at the Summer General Meeting in Boston 2016

DRWG Presentations Wanted

Anyone interested in making a presentation (limit 30 minutes or less) should send the Title, Presenter, Duration, and 1-3 line description to v.werner@ieee.org at least two months before the meeting at which you want to present.

Vince Carter & Brett Efav gave a presentation: Feeder Trunk Hardening Program @ Idaho Power

SWITCHING AND OVERCURRENT PROTECTION – Fred Friend, Chair

Chair Fred Friend called the meeting to order at 10:00 AM with 24 participants present. The IEEE slides for Working Groups were presented. The July 2014 meeting minutes were reviewed and approved without comment.

•Proposed joint (w/ Reliability WG) panel session – PES General Meeting:

Placement of Automated Distribution Protective and Switching Devices for Reliability

"How many Reclosers / Smart Switches are Too Many? - Sectionalizing to 300 customer zones using only local intelligence", Andrew J Kasznay

- "Modeling and simulation of automated switching devices", Larry Trussell
- "Identification, Prioritization, and Placement of Automatic Sectionalizing Devices at PECO", Joe Viglietta
- "Reliability-Centered Auto-Isolation Device Placement at PacifiCorp", Heide Caswell.

P1806 Guide for Reliability Based Placement of Overhead and Underground Switching and Overcurrent Protection Equipment Up to and Including 38 kV

- Review approved Title, Scope, Purpose
- Review document
- Assignments

Heide Caswell gave a presentation: Reliability-Centered Auto-Isolation Device Placement at PacifiCorp

SMART DISTRIBUTION – Larry Clark, Chair

Larry Clark welcomed the Group that included 37 representatives of utilities, vendors, and academic institutes. Annual vote for SDWG leadership in compliance with IEEE PES P&P was conducted unanimously electing Larry Clark-Chair, Bob Uluski-Vice Chair and Fred Friend-Secretary. Larry briefly reviewed the IEEE policies on patents, copyrights, etc. The minutes of the last meeting (Washington, DC, July 2014) were briefly discussed including online availability and were subsequently approved unanimously.

John McDaniel and Larry Clark updated the working group on PES reorganization discussions and suggestions. While a recommendation had been made at the PES level to move the DMS TF

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from the T&D committee to the PSPO committee, however, this reorganization change will not be made at the present time.

Shay Bahramirad updated the progress of the P1854-Project and, identified gaps within the guide and the need for additional volunteers. The PAR expiration date is 31-Dec-2016. The guide sections update included a request for additional assistance with the development of introductions for each section of the guide and development of additional input for the sections for the Efficiency improvement application, the Hosting Capacity and the Outage Management.

The 'Smart Distribution Systems' tutorial (1/2 day version working with the IEEE PES IGCC) is to be performed on Tuesday, February 17, 2015 at the ISGT meeting in Washington, DC. The invited panel session 'Smart Distribution Applications', Chair: Shay Bahramirad is to be performed at the IEEE PES 2015 ISGT meeting on February 18, 2015.

The Smart Distribution Working group is sponsoring 3 invited panel sessions at the 2015 GM in Denver, CO. The 3 panel topics are 'Role of DERMS/DMS in managing Distributed Energy Resources (DERs)', Chair: Bob Uluski; 'Volt/VAR Control in the Era of the Smart Grid', Chair: Le Xu; and 'Protection design for Smart Distribution', Chair: Nouredine Hadjsaid and Georges Simard.

Larry Clark reported that Anil Pahwa, chair of the DMS DA Award selection committee, is accepting nominations for the 2015 award. The Nomination deadline for the 2015 award is extended to January 31, 2015. Nomination and the supporting letters should be submitted to Anil Pahwa by the nominator by the deadline through email (Pahwa@ksu.edu) with the subject of the email message being "2015 IEEE PES Douglas M. Staszkesky Distribution Automation Award - Nomination".

Larry Clark reviewed the requirements for the development of an invited panel proposal. For the IEEE PES 2016 GM, invited panel proposals need to be submitted during 4th quarter 2015. The proposal is to include the title and the moderator for the invited panel proposal.

The '*Smart Distribution Systems*' tutorial (Full day, 8-hour course) is to be performed on Sunday, July 26, 2015 at the GM in Denver, CO. The tutorial is an update of the 2010-11 presentations of the SDS Tutorial.

The next SDWG meeting is at 2015 IEEE PES GM in Denver, CO at Sheraton Denver Downtown Hotel in Denver, CO on July 26-30, 2015.

DMS Task Force (DMS TF) – Bob Uluski

Bob Uluski welcomed the group which included 30 representatives of utilities, vendors, and academic institutes. Bob briefly reviewed the IEEE policies on patents, copyrights, etc. Minutes of the last meeting (Washington, DC, July 2014) were accepted without amendment.

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The group heard presentations on DMS/OMS Implementation at Alabama Power (Larry Clark, Alabama Power Company) and DERMS Implementation (John Sell, Alstom Grid). The presentations prompted questions and roundtable discussions regarding DMS applications.

The next DMS TF meeting is at 2015 IEEE PES GM in Denver, CO at Sheraton Denver Downtown Hotel in Denver, CO on July 26-30, 2015.

Volt/VAR Control & Optimization (VVTF) Task Force – Larry Conrad

Larry Conrad welcomed the group which included 30 representatives of utilities, vendors, and academic institutes. Larry briefly reviewed the IEEE policies on patents, copyrights, etc. Minutes of the last meeting (Washington, DC, July 2015) were accepted without amendment.

Murty Yalla provided a status report of the proposed tutorial on Distribution Volt-Var Control and Optimization at the 2015 general meeting in Denver. The tutorial outline was reviewed. The tutorial will cover basic principles, approaches, challenges, results as well as case studies from GA Power, BC Hydro, and Duke Energy. The tutorial has 9 contributors.

Bob Uluski provided a progress report on P1885/D01 – Draft Guide for Assessing, Measuring and Verifying Volt-Var Control Optimization on Distribution Systems. Recent section additions were reviewed. Sections needing review and/or additional input were identified. There is a desire and/or need to add more VVO topics. Content volunteers are needed. VVO M&V section has not been written and needs an author.

Larry Conrad facilitated a roundtable discussion of Distributed Resources. Task force was asked for comments, if any, regarding P1547.8 as it relates to volt/var management, which had been previously distributed to the task force.

The next VVTF meeting is at 2015 IEEE PES GM in Denver, CO at Sheraton Denver Downtown Hotel in Denver, CO on July 26-30, 2015.

DISTRIBUTED RESOURCES INTEGRATION – Tom McDermott, Chair

Julio Romero Aguero (Vice Chair) chaired the session on behalf of Tom McDermott (Chair). Minutes of July 29, 2014 meeting at 2014 IEEE PES General Meeting (National Harbor, MD) – Minutes presented and approved by the working group

Tom McDermott provided the status of IEEE P1547 for the WG over a teleconference. Next meeting will be held in February at NRECA on February 10-12 in Arlington, VA. , attendees should register by Jan 30.

- 1547 (base standard) has a PAR for full revision
- P1547a (amendment for voltage regulation and expanded voltage/frequency trip settings) has been approved and published
- P1547.1a (changes to test regimen supporting P1547a), last meeting was June 24-25 in Las Vegas.
- P1547.8 (recommended practice for expanded use) preparing draft 7 for ballot

- See <http://grouper.ieee.org/groups/scc21/> for logistics. You should attend SCC 21 meetings if you wish to influence the standards development process. You should become an IEEE Standards Association member if you wish to vote on standards.

Update on IEEE P2030.7 Standard for Specification of Microgrid Controllers - WG on Distributed Resources Integration – Prof. Geza Joos (McGill University). – Contributions to the standard were requested, volunteers instructed to email Prof. Geza Joos or Dr. Julio Romero Agüero about participation.

Presentation by Larry Conrad: *New Complexities in Effective DG Grounding*

Panel session at 2015 PES General Meeting

- Microgrid Panel – Prof. Amin Khodaei will present on a Microgrid topic, second panelist to be determined – contact Dr. Julio Romero Agüero about potential presenters.
- DG interconnection Lessons Learned – Moderated by Bob Arritt
- Need two additional panelists – Volunteers will contact Bob Arritt

Discussion about scope of Microgrid Task Force – Julio presented the scope of work of the MG task force includes panel session in 2016 T&D task force, panel session in 2016 GM, and report by the end of 2016. The scope of work for the task force is to be defined prior to the July GM in Denver. Task force approved by the WG. TF to collaborate with the other IEEE WGs and TFs related to Microgrids (e.g. 2030.7)

Volunteers for the task force:

- Chair – Prof. Amin Khodaei
- Vice Chair – Dr. Aleksi Paaso
- Secretary – TBD

Additional volunteers to contact Prof. Amin Khodaei or Dr. Julio Romero Agüero.

Presentation by Dr. Shay Barahmirad (Manager, Smart Grid, ComEd): *Microgrid Initiatives at ComEd*

VOLTAGES IN PRIVATELY AND PUBLICLY ACCESSIBLE LOCATIONS – Chuck DeNardo, Chair

The Working Group on Voltages at Publicly and Privately Accessible Locations (aka the Stray & Contact Voltage Working Group) met at the 2015 IEEE PES JTCM on the afternoon of Monday January 12th at the Hyatt Regency Orange County in Garden Grove, California. There were approximately 40 people in attendance.

Following an introduction of attendees and approval of the Washington DC meeting minutes, Sal Martino of EPRI gave a short presentation concerning the stray and contact voltage equipment test facility to be built by EPRI. He also spoke of increased efforts to collect and analyze investigative data. The chair then indicated the first official draft of the guide we have been working on (i.e. D1) had been submitted for mandatory editorial coordination, and the changes to our PAR requested at the last working group meeting had been approved by IEEE SA. These

changes include a new title (i.e. Draft Guide to Understanding, Diagnosing and Mitigating Stray and Contact Voltage), an extension of the PAR to December 31, 2016, a change in the type of guide from trial use to full service and minor changes to the scope and purpose. A lengthy discussion of the balloting process and ways to submit comments if you don't plan to join the ballot followed. It was decided the existing Editorial Task Force would now become the Comment Resolution Group. This group will receive and draft responses to all submitted comments, and will bring the revised draft (i.e. D2) back before the Working Group at the Denver meeting in July. The remainder of the meeting was spent reviewing the submitted draft in an effort to solicit suggestions that could be used by would be balloters to improve the guide.

LIAISON REPORTS

Insulated Conductors – Harry Hayes

Working Groups are trying to harmonize the terminator and splice standards. Working Groups are also revising the separable connector standard and the application guide for faulted circuit indicators. Work is underway to develop a submerged designation for medium voltage cables. This is a cooperative effort of the ICEA and AEIC CEC. There have been a number of discussions regarding the performance of connectors used in premolded splices. Work continues in this area. ANSI C119 is planning to issue all of the point documents later this year with major changes. A new C119.0 standard will be released that contains all of the common connector tests and instructions for performing the tests. The point documents, that address specific connector designs, will retain the tests unique to that family of connector. ANSI is also developing a new standard (C119.7) for connectors designed to operate above 93°C. A Round Robin test was completed to gain initial data on these connectors and test parameters. The information obtained during these tests indicated that additional testing is required in order to develop an effective standard. ANSI is seeking funding for a second Round Robin test. Industry support is needed for this testing.

Power System Communications

No report is available.

Power Systems Instrumentation and Measurement (PSIM)

No report is available.

Power System Relaying Committee

The next meeting will be at the Hilton Palacio del Rio, San Antonio, TX, 11 – 14 May 2015.

Subcommittees of the PSRC are Systems Protection, Line Protection, Relaying Communications, Relaying Practices, Rotating Machinery and Substation Protection.

Meeting minutes can be viewed from the following link: <http://www.pes-psrc.org/Aminutes.html>

The following items may be of special interest to the Distribution Subcommittee members of the T&D Committee.

Revision of C37.114 Guide for Determining Fault Location on AC Transmission and Distribution Lines was approved and should be ready for publication soon.

Working Group C2, chaired by Alex Apostolov, is nearing completion of a report to the PSRC to identify the functions and data available in Protective Relaying Devices used at different functional levels and different applications within a Smart Grid.

Working Group C4, chaired by Galina Antonova, is developing a guide C37.244 for the performance, functional, and information communication needs of Phasor Data Concentrators for power system protection, control, monitoring, and information management. The Guide will include system needs for PDC applications, configuration, and testing procedures.

Joint Working Group C17, co-chaired by Dean Miller, Reigh Walling, and Ron Harley is preparing a report on Fault Current Contributions from Wind Plants.

Working Group D28, chaired by Brian Boysen, is revising and updating C37.230 – Guide for Protective Relay Applications to Distribution Lines.

Working Group I22, chaired by Bob Beresh, is preparing a report to the PSRC titled “End of Life Assessment for P&C Devices for determining the end of useful life for protection, control, and monitoring devices.

Link to completed PSRC reports http://www.pes-psrc.org/Reports/APublications_new_format.htm

SCC 21

No report is available.

STANDARDS

NESC – Rusty Soderberg

A preprint of the change proposals to the 2017 Code is available on-line at <http://standards.ieee.org/about/nesc/>. The availability of the preprint opens the comment period on the 2017 change proposals (CP's). Distribution Subcommittee members should review and comment as they see necessary. The votes were very close on some of the change proposals so your comments will make a difference. Comments are due by May 1, 2015.

There are 751 total change proposals. The majority of the change proposals are in the clearance section and in the strength and loading section.

The Working Group on TP&C Changes to the NESC met on Monday, January 12, 2014. The meeting was comprised of two parts, the first was a presentation by Robert Harris and Kevin Jordan, titled, “Engineering Analysis of Possible Effects of 2017 NESC Change Proposal to Modify or Remove 60’ Exemption.” The 60’ exemption allows most distribution poles to be exempt from certain analyses. This presentation reviewed the effect on the Medium Loading

District, and of the change proposals regarding this subject the change proposal that passed will have minimal effects on utility costs, another will have some effect, and total removal of the 60' exemption will have significant effects on cost. It needs to be noted that during the NESC meetings that I attend, none of the 60 foot change proposals were thought to be needed for additional safety by any of the utilities represented. All of the 60 foot change proposals add additional complexity to the Code. Robert Harris discussed the presentation in the Distribution Subcommittee meeting and the presentation is attached with these minutes.

The second part of the working group meeting was spent discussing some of the key change proposals for 2017 which I discussed in the distribution subcommittee meeting and are listed below.

CP 4701 was written to provide simplicity and clarity in Rules 215 C2-C8 regarding guy wire grounding and insulation. Discussions revolved around the possibilities of guys breaking/sagging into energized conductors. This is an extensively debated subject and is worth taking a look at in the preprint.

CP 4683 is a proposed change to use the resulting sags from Rule 250D, "Extreme ice with concurrent wind loading" for clearances over roadways etc. in addition to using the district map. This may require the use of taller poles for utilities.

CP 4694 is proposing to add strength factors to insulators. This will impact both utilities and manufacturers, with the possibility of utilities having to move to larger dead-end insulators.

CP 4506 would decrease the safety factors if using non-linear analysis methods. This should not have any effect on distribution since when using linear analysis the safety factors remain the same however taller structures may be negatively impacted.

CP 4700 During the Subcommittee 5 meeting in September 2013 a proposal was made to make Grade B construction applicable not only when crossing a limited access highway, railroad, or navigable waterway, but also applicable to any lines running along these areas (if the line could fall into them). This would be a big change for distribution that is unwarranted. The voting on this was close.

CP's 4602 4603 4606 4609 are change proposal to remove Grade N from the Code. My utility does not use Grade N construction, but I would be interested to know what utilities do use it, and to hear your comments on these proposed change proposals.

CP 4651 is a change proposal to eliminate the k factor (the constant listed in Table 251-1) in the Code. This may affect companies sag and tension tables (more work for the utilities) with no increase in safety. This proposal was voted down.

CP 4641 is replacing the extreme ice maps. This will negatively impact some northern states and perhaps other states in the nation as well. In one example the wind increased from 40 mph to 50

mph, this will most likely mean an increase in pole size for some northern states. If the 60 foot exemption is removed from the Code this could mean big changes for some utilities.

PANEL SESSIONS

Panel Sessions planned are:

1. IEEE PES 2015 ISGT: *Smart Distribution Applications* – Chair: Shay - February 18th
2. SPM 2015: *Role of DERMS/DMS in managing Distributed Energy Resources (DERs)* – Chair: Bob Uluski
3. SPM 2015: *Volt/VAR Control in the Era of the Smart Grid* – Chair: Le Xu
4. SPM 2015: *Protection design for Smart Distribution* – Chair: Nouredine Hadjsaid and Georges Simard. SPM 2015: *Protective Device Placement* – joint by the WG on Distribution Reliability and WG on Switching and Overcurrent.
5. SPM 2015 *DG Interconnection* – by WG on DRI
6. SPM 2015: *Microgrid Panel* – Prof. Amin Khodaei will present on a Microgrid topic, second panelist to be determined – contact Dr. Julio Romero Agüero about potential presenters.
7. SPM 2015: *DG interconnection Lessons Learned* – Moderated by Bob Arritt. Need two additional panelists – Volunteers will contact Bob Arritt
8. SPM 2015: *Protective Device Placement*, Fred Friend Moderator.
9. SPM 2016: *Extreme Events*, Heide Caswell Moderator
10. SPM 2016: *Best Practices- Top Quartile Companies for Reliability*, John Helm

TUTORIAL

- *Smart Distribution Systems* tutorial (1/2 day version working with the IEEE PES IGCC) is to be performed on Tuesday, February 17, 2015 at the ISGT meeting in Washington, DC.
- *Smart Distribution Systems* tutorial (Full day, 8-hour course) is to be performed on Sunday, July 26, 2015 at the Summer Meeting in Denver, CO.

PRESENTATIONS

Presentations from this meeting and those from previous meetings are posted at the Distribution Subcommittee website:

<http://grouper.ieee.org/groups/td/dist/presentations/>

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Appendix: Current Membership Roster

Chair: Romero Aguero, J., Raleigh, NC
Vice Chair: Bahramirad, Shay., Chicago, IL
Secretary: Werner, Val, WI

Bahramirad, S., Oak Brook, IL
Bouford, J., Augusta, ME
Carroll, P., Milwaukee, WI
Carter, V., Boise, ID
Caswell, H., Portland, OR
Clark, L., Birmingham, AL
Cole, J., Bozeman, MT
Conrad, L., Plainfield, IN
Delmas, H., Montreal, QC
DeNardo, C., Milwaukee, WI
Fan, J., Duluth, GA
Friend, F., Columbus, OH
Gilmer, D., Kerrville, TX
Hayes, H., St Louis, MO
Hisayasu, R., Bellevue, WA
Holt, A., Kansas City, MO
Hoogendam, I., Portland, OR
Isom, M., Oklahoma City, OK
Lambert, F., Forest Park, GA
McDaniel, J., North Syracuse, NY

McGranaghan, M., Knoxville, TN
Miller, L., Knoxville, TN
Ortega, J., Oakbrook Terrace, IL
Patterson, M., Boise, ID
Pierce, W., Bend, OR
Rafferty, M., Jacksonville, FL
Robinson, R., Topeka, KS
Romero Aguero, J., Raleigh, NC
Sabin, D., Beverly, MA
Saint, B., Arlington, VA
Simard, G., Ste-Therese, QC
Smith, J., Phoenix, AZ
Soderberg, R., Jackson, MI
Tobin, E., Everett, WA
Venkata, M., Redmond, WA
Viglietta, J., Philadelphia, PA
Ward, D., Richmond, VA
Warren, C., Albany, NY
Werner, V., Milwaukee, WI
Xu, L., Raleigh, NC