

**IEEE Distribution Subcommittee
Meeting Minutes
January 9, 2008
San Antonio, Texas**

The meeting convened at 1:00 p.m. with 21 members and 2 guests present. The minutes from June 2007 meeting were read and approved.

ADMINISTRATIVE

Chair Cheri Warren called the IEEE Distribution Subcommittee meeting to order. The notes from our June meeting were approved.

PRESENTATIONS – Carey Cook, *IEEE Color Book Update*

Attached is a copy of the presentation. There are currently 13 IEEE Color Books. These books are very important to IEEE and are very useful. The problem is that these books cannot be updated in a timely fashion.

There is a joint IAS/PES project to revise these books. There will be multiple working groups working on the revisions. The Color Books will be broken up into multiple parts for ease of revision. All are welcomed to join.

For Reliability, Robert Arno (RArno@alionscience.com) is the chair. Please contact him if you are interested in helping.

CHAIR REPORT – Cheri Warren, *Distribution Subcommittee*

The group last met in Tampa in June 2007. Since that time we have held many interim meetings for various Working Groups. The following groups have held interim web based meetings thus making considerable progress on their work efforts:

- WG on Publicly and Privately Accessible Locations
- TF on Interruption Reporting
- WG on Reliability – Catastrophic Days
- TF on Weather Normalization.

We have been asked to participate in the joint IAS/PES Color Book rewrites. Carey Cook will provide more details.

The Subcommittee was polled regarding strategic undergrounding of distribution circuits for Dominion. Thanks for your help in answering their short survey. If you read through the EEI paper - Out of Sight; Out of Mind, you'll get a balanced perspective on why too much of this isn't going on. There has to be a means of recovering the increased expenditures. Without such a mechanism to recoup these costs, utilities just won't do it, as the survey supports.

Dick Hensel has officially retired from IEEE. We thank him for his years of service and wish him well in his retirement!

We need to support the JTCM's in the future. The Transmission portion of the T&D Committee did not attend this meeting. This is putting financial pressure on IEEE PES to support this meeting. We are having trouble finding locations for the GM's because we need so many concurrent rooms. PES will be looking to better understand how rooms are used.

The Intelligent Grid Subcommittee was formed in Tampa. Erich Gunther introduced the scope of the Subcommittee. It will address the technologies that apply to T&D, identify opportunities for their future applications, and provide a forum for the free exchange of information. Rather than duplicate other ongoing efforts, the focus here will be to make sure that the IEEE-PES T&D Committee point of view is seen, heard, and utilized in implementing grid modernization. Initial tasks will include the following:

- Definitions
- Outreach / Education
- Panel session / super session / T&D in Chicago and Pittsburgh GM
- Web site for collaboration
- Adopt / expand Olivier document - 1014600?
- Why smart grid – making the case
- List/summary of activities
- Grid groups (GMC 7 plus)
- Applicable IEEE and IEC standards
- Applicable IEEE and IEC groups / activities
- Architectural templates

We need to discuss officer rotation for our subcommittee. My term is up at the end of this year. The membership needs to decide if they would like me to continue for another 3 years of service in this role.

Our next meeting will be held in Pittsburgh at the GM July 2008.

VICE CHAIR REPORT – John McDaniel, *Distribution Subcommittee*

Between June 2007 and January 2008, the subcommittee has been assigned a total of 40 transactions grade papers and two PES Letter to review. Of these, 17 were new papers and 13 were revisions. This is down from the same period last year, especially the number of revised papers. The web site for the process is located at: <http://tpwr-d-ieee.manuscriptcentral.com/> .

The Distribution SC is falling significantly behind on reviewing papers. Of the 16 papers that are awaiting their first review, there are eight which no one has volunteered to review or that there are too few reviewers. If this continues, I may have to start assigning people to review these papers.

A plurality of the papers that are being assigned to the Distribution Subcommittee are Distributed Resource type papers. And these papers are the ones where I am not getting volunteers to review

them. At the 2007 General meeting, the Integration of Renewable Energy into the Transmission and Distribution Grids Subcommittee had agreed to take over the reviews of these papers. But there was no action on the part of their editor and all of the papers were assigned back to the Distribution SC. If new subcommittees are formed in special interest areas, then they should be responsible for reviewing those papers. Cheri Warren and I will be taking this up with the T&D Committee.

Periodically I will send out a list of papers that require review by the subcommittee to the members of the subcommittee. I'll ask for volunteers to review the papers. After someone volunteers I will assign him or her to review the paper(s) in the system. This will automatically generate an email to the reviewer giving them the web site's address. The reviewer then will log into the system and review the paper(s).

If you do volunteer to review a paper, please make every effort to complete the review with in a month. IEEE/PES has the goal of completing reviews within 90 days. As the paper may have been received up to a month before I ask for volunteers, those that do volunteer to review the paper should make every effort to review it in a timely fashion. If there are a sufficient number of reviews returned and the paper is approaching the 90-day limit, I will return the review with those that have been received.

On another note, if there are any new engineers within your company, one way to get them involved within IEEE is to have them review transaction papers. This could also become a good learning experience for these engineers. If there are any new, or newer, engineers within your company that you feel are qualified, please send me their contact information. If we can get some new reviewers, maybe we can get them to attend meetings in the future and add to our membership base.

WORKING GROUP REPORTS

DISTRIBUTION RELIABILITY (formerly SYSTEM DESIGN) – Cheri Warren, Chair

Task Force on Reliability Indices – Rodney Robinson

There were 36 attendees present for the meeting.

The TF PAR has been submitted and will be reviewed in the March NesCom meeting for approval.

The TF discussed the fact that further work will be needed to bring Section 3.0 in line with the terminology presented in the Sections 1.0 and 2.0 along with an overall clean up of the draft in the IEEE format. For the remainder of the TF meeting, the attendees reviewed in more detail Section 3.0 and identified changes that needed to be made to make the information clearer and consistent with the earlier sections. Lastly, the TF agreed to set up a time at the April T&D Expo

for a working session to dig into the latest draft and refine the guide in preparation for the July General Meeting TF meeting.

Task Force on Reliability Indices P1366 - Cheri Warren

There were 44 attendees present for the meeting.

The attendees reviewed and approved the WG meeting minutes from the June 2007 Tampa meeting.

Catastrophic Event group - The attendees heard presentations from the subgroup that have been working on the determination of the need to have a Catastrophic Event exclusion in the Guide. Jim Bouford, Heide Caswell and Chantal Bitten presented the results of their reviews that have been completed to explain the need to identify Catastrophic Events and to exclude them when determining the TMED. This subgroup agreed to continue their discussions and develop a recommendation for the WG.

2006 Benchmarking Results - Poorani Ramachandran presented the results of further analysis of the 2006 Benchmarking specifically on the questions raised in the Tampa meeting. After discussing these results, the WG agreed that everyone wanted to continue the IEEE benchmarking for 2007 results.

Based on the need to clean up IEEE 1366 and possibly incorporate additional information in the IEEE 1366, John McDaniel will take out the PAR for the WG.

Since the time was short in the meeting, the attendees were asked to send to Rodney Robinson their regulatory updates for inclusion in the minutes and sharing with the entire WG.

Task Force on Weather Normalization – Tom Short

For Charles Perry, Val Werner discussed the paper written by the group on wind correlations and normalization approaches based on weather statistics. The group anticipates finalizing the document for their Pittsburgh General Meeting.

Task Force on Duration Indices – Joe Viglietta

The attendees discussed the need to include some of the new duration indices into IEEE 1366 in future updates with mixed opinions. Everyone agreed to send their comments to Val Werner who will compile the results of the comments received.

SWITCHING AND OVERCURRENT PROTECTION – Charlie Williams, Chair

A summary paper on the new IEEE C37.230, “Guide for Protective Relay Applications to Distribution Lines”, developed by the Power Systems Relay Committee was distributed to the working group. The previously developed outline for our Guide was placed on hold. The focus of the discussion was to concentrate on the “Whys” of protective devices and offer alternatives and reasons including when and where to apply the devices.

The PAR for our Distribution Overcurrent Protection Guide is on hold until we finalize the Scope and Purpose.

Charlie Williams provided a presentation on Predictive Reliability for Distribution Feeder System Designs.

The Network Tutorial has been canceled for the IEEE PES T&D Meeting in Chicago in April 2008. It will be re-scheduled as soon as possible.

DISTRIBUTED AUTOMATION – Session introduced by NDR Sarma, Vice Chair (Doug Staszkesy, Chair, was unable to attend due to illness and we were all saddened to learn that, a short time later, Doug passed away.)

37 members present

New DA WG Officers for the next 2 years:

NDR Sarma is stepping down as Vice Chair

Georges Simard is new Chair

Larry Clark is new Vice Chair

Bob Uluski is new Secretary

Preparation of Panel Sessions for T&D IEEE Conference, Chicago

- "Communication and Information Management Technologies for Distribution Automation": Four papers to present at this conference

Preparation of Panel Sessions for IEEE / PES 2008 general meeting, Pittsburgh

- "Communication and Information Management Technologies for Distribution Automation": Many excellent papers have been submitted for this panel. The papers will need to be screened to select the best four papers to present at the conference
- "Utility Experiences with DSM and AMI Implementation": Four papers have been submitted and will be presented during this session

Revision to DA Tutorial

Existing DA tutorial will be revised to reflect current trends; revised tutorial will place additional emphasis on Information Technology (IT) and Communication issues

“Tech Watch”

The Tech Watch section created on the Distribution Automation web site will be updated with new information obtained during January 2008 DistribuTECH conference and the April 2008 T&D IEEE Conference.

Technical Presentations

Two technical presentations were made within the WG

- “Application Integration of Distribution Automation Technologies at Alabama Power Company”, Larry Clark
- “Current status of BC Hydro DMS project”, Bob Uluski

We planned to meet at the general IEEE/PES technical meeting in Pittsburgh in July 2008.

DISTRIBUTED RESOURCES INTEGRATION – Bob Saint, Chair

The DR Integration Working Group met Wednesday morning at 10 am with 29 members and guests present. The main topic of discussion was the Annex for IEEE 1547.2 on System Planning Studies for DR Integration. This is the product, as modified by the P1547.2 working group, of this working group. There was much discussion on the future activities of this working group and the status of the System Planning Study Annex. It was generally agreed that it should become a numbered IEEE Guide. At the next meeting a draft PAR will be prepared for the working group to review. WG Chairman Bob Saint will also discuss the feeling of the working group with SCC 21, which may change the status of a PAR from this working group.

In addition, this working group will sponsor a panel session on DR Integration Planning Studies at the 2009 PES General Meeting and the 2010 PES T&D Conference.

LIGHTNING PERFORMANCE OF DISTRIBUTION LINES – John McDaniel, Chair

IEEE 1410, Guide for Improving the Lightning Performance of Overhead Distribution Lines, has a PAR for an updated version and comments from Carlo Alberto Nucci have been circulated to the WG members. Other attendees are invited to review the document as well. Comments received from Mohamed Shwedhi suggest that the additional rigor in calculating overvoltages is too complicated for a standard. It was noted that a version of the LIOV code will be provided with the standard, as an appendix, in the same way that the FLASH program is used in the companion 1243 standard. Comments were also received from Mat Darveniza noting that some simplifications – use of 200 kV BIL for 1.2/50 μ s wave – can be suggested.

Mat Darveniza raised a question about the level of cable failures on unshielded lines. A response from Florida is that the buried cables near the base of unshielded structures in the Tampa area are frequently damaged by burn-through from the tower base. Riser pole arresters have higher energy handling capability up north and the problems are less frequent.

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

The Working Group on Voltages at Publicly and Privately Accessible Locations met in San Antonio, Texas from 2:00 p.m. to 5:00 p.m. on January 7, 2008. Approximately 35 people were

in attendance. Following approval of previous meeting minutes and introduction of attendees, Craig Frommelt of Ameren CILCO gave an informative presentation titled "Stray and Contact Voltage Case Studies". Following Mr. Frommelt's presentation the group agreed that it would be a good idea to establish case study guidelines and solicit a wide variety of case studies for possible inclusion in the proposed guide.

The remainder of the meeting was spent discussing the initial drafts of outline section 4 (i.e. General Discussion) and outline section 6.3 (i.e. Contact Voltage Investigation). Comments were noted and will be incorporated and brought back to the group prior to the next meeting. The following individuals volunteered to take the lead on the outline sections indicated. The Working Group is still looking for people to take the lead on the remainder of the agreed to outline sections.

Outline Section 4 - General Discussion - Chuck DeNardo & Frank Doherty

Outline Section 6 – Contact Voltage – Dave Kalokitis

Outline Section 7 – Stray Voltage – Craig Frommelt & Ed Kamiab

Prior to this face to face meeting a Working Group web meeting was held on December 6, 2007. The web cast was attended by approximately 25 people. Dr. Doug Reinemann of the University of Wisconsin gave an excellent presentation titled "A Review of Stray Voltage Research in North America".

LIAISON REPORTS

Insulated Conductors – John Banting

The three-phase Guide (P1610) for faulted circuit indicators (FCI), the single-phase Guide (P1215) and the Test Guide (P495) were all successfully balloted. P495 and P1610 should be published sometime this month. P1215 has already been published.

Power System Relay Committee/Broadband on Power Lines – John Banting

The Hardware Guide (P1675) was recently balloted. There were some negative ballots which will need to be resolved and re-circulated for ballot. The Test Guide (P1775) is still under development.

SCC 21 – Bob Saint

IEEE 1547.3 (Guide for Monitoring, Information Exchange and Control of DR Interconnected with EPS) has been completed and is available for purchase from IEEE.

IEEE 1547.2 (Application Guide for IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems) is currently forming a balloting committee (closed January 10). May be able to be completed this year.

IEEE 1547-2003 (Standard for Interconnecting Distributed Resources with Electric Power Systems) is up for reaffirmation this year.

Next meeting of the active 1574 Series working groups is February 4-8, 2008 at Georgia Power's offices in Atlanta. 1547.6 (Draft Recommended Practice for Interconnecting Distributed Resources with Electric Power Systems Distribution Secondary Networks) is meeting Monday - Wednesday. 1547.4 (Draft Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power Systems) is meeting Thursday - Friday.

Intelligent Grid Subcommittee- Georges Simard

The Transmission and Distribution Committee may establish an Intelligent Grid Subcommittee. This new Subcommittee would function as a forum for exchanging and integrating information about such grids and also have a website for these purposes. Topics under consideration would include the definition of a smart grid and how to make a business case for it. There will be a panel session.

STANDARDS

NESC – Rusty Soderberg

The last meeting was the fall of 2005. The next meeting will be held this fall. To find out how submit change request, contact Greg Obenchain gobenchain@eei.org . July 17, 2008 is the deadline to submit change proposals.

NEC

No updates.

DISCUSSION

Mike Pehosh – WG 7.6 Underground color coding on underground/duct banks. If you have any comments, send them to Mike at: michael.pehosh@nreca.coop

Harry Hayes – C119.5 is a new standard on insulation piercing connectors. There is an 0.7 for high temperature connections and an 0.4 for overhead connectors.

Val Werner – Brought up the interruption/outage definitions and which is the proper one to use.

Rodney Robinson – Need a deadline to get work done. We need at least two meetings a year to write standards. One meeting a year will slow this down.

Heidi Caswell – DOE and others are evaluating the cost of outages. They are updating a 2004 study. Heidi has a copy if anyone interested: heidimarie.caswell@pacificcorp.com.

PRESENTATION

Carey J. Cook gave a presentation about the IEEE's Color Book Re-Engineering Project. IEEE recognizes that the Color Books need to be updated and has begun a project to replace the Color Books with new documents. The Technical Books Coordinating Committee is overseeing eight new Working Groups (WG) formed along technical content lines. This new structure has been approved by IEEE and WG PARS will be submitted shortly. The work is beginning immediately in order to meet an ambitious schedule - revise material and conduct ballots in 2008-2009 and complete the project in 2010. The Working Groups, their Chairs and the material they will cover in their documents are:

- **General Material (Base Book) WG**
 - **Chair: Dave Mills**
 - E-Mail Address: (d.mills@ieee.org)
 - # of Topical Areas (dot standards): 1
 - Will include all materials of a general nature
 - Will serve as introduction to the more detailed information found in the individual dot standards

- **Power System Design WG**
 - **Chair: Peter Southerland**
 - E-Mail Address: (peter.sutherland@ge.com)
 - Covers Content Previously in the:
 - Red Book
 - Gray Book
 - Bronze Book
 - White Book
 - # of Topical Areas (dot standards): 11

- **Power Systems Analysis WG**
 - **Chair: Farook Shokooh**
 - E-Mail Address: (farrokh@etap.com)
 - Covers Content Previously in the:
 - Violet Book
 - Brown Book
 - # of Topical Areas (dot standards): 11

- **Power Systems Grounding WG**
 - **Chair: Doug Dorr**
 - E-Mail Address: (d.dorr@ieee.org)
 - Covers Content Previously in the:
 - Green Book
 - Emerald Book
 - # of Topical Areas (dot standards): 5

- **Protection and Coordination WG**
 - **Chair: Rasheek Rifaat**
 - E-Mail Address: (Rasheek.Rifaat@jacobs.com)
 - Covers Content Previously in the:
 - Buff Book
 - Blue Book
 - # of Topical Areas (dot standards): 13

- **Emergency/Stand-By Power Systems WG**
 - **Chair: Joe Weber**
 - E-Mail Address: (Jweber@ASCO.COM)
 - Covers Content Previously in the:
 - Orange Book
 - # of Topical Areas (dot standards): 7

- **Power Systems Reliability WG**
 - **Chair: Robert Arno**
 - E-Mail Address: (RArno@alionscience.com)
 - Covers Content Previously in the:
 - Gold Book
 - # of Topical Areas (dot standards): 6

- **Maintenance, Operations, and Safety WG**
 - **Chair: Dennis Neitzel**
 - E-Mail Address: (dennis.neitzel@avotraining.com)
 - Covers Content Previously in the:
 - Yellow Book
 - # of Topical Areas (dot standards): 3

Appendix: Current Membership Roster

Chair: Warren, C., Albany, NY

Vice Chair: McDaniel, J., Syracuse, NY

Secretary: Tobin, E., Everett, WA

Ardrey, G., Beloit, WI

Banting, J., Pewaukee, WI

Bouford, J., Augusta, ME

Burke, J., Cary, NC

Caswell, H., Portland, OR

DeNardo, C., Milwaukee, WI

Ehrlich, R., Newark, DE

Fijnvandraat, C., Andover, MA

Forte, V., Albany, NY

Frost, K., Oakbrook Terrace, IL

Gilmer, D., Craig, CO

Goodfellow, J., Redmond, WA

Hall, D., Newark, DE

Hayes, H., St. Louis, MO

Khodaie, M., Albuquerque, NM

Lacy, S., Fontana, CA

Lambert, F., Forest Park, GA

McDermott, T., Pittsburgh, PA

Meade, K., Charlotte, NC

Moran, N., San Francisco, CA

Nuthalapati, S., College Station, TX

Obenchain, G., Washington, DC

Pahwa, A., Manhattan, KS

Pehosh, M., Arlington, VA

Perry, C., Knoxville, TN

Riley, C., Forest Park, GA

Robinson, R., Topeka, KS

Russo, D., Seattle, WA

Sabin, D., Knoxville, TN

Saint, B., Arlington, VA

Schwalm, A., Victor, NY

Short, T., Ballstonsper, NY

Siew, C., Burnaby, BC, Canada

Simard, G., Montreal, QC, Canada

Smith, J., Phoenix, AZ

Soderberg, R., Jackson, MI

Taylor, L., Charlotte, NC

Thatcher, M., Kansas City, MO

Viglietta, J., Philadelphia, PA

Walling, R., Schenectady, NY

Wang, D., New York, NY

Ward, D., Richmond, VA

Welch, G., Raleigh, NC

Werner, V., Milwaukee, WI

Williams, C., Maitland, FL