

IEEE Distribution Subcommittee

- Approved Meeting Minutes -

July 24, 2002,
New York City, New York

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Administrative

Chair Dan Ward called the IEEE Distribution Subcommittee meeting to order.

Chair Report - Dan Ward

The T&D Committee, under pressure from the Technical Council, has agreed to form a new subcommittee - the Power Quality Subcommittee. Our voltage quality working group will have to vote on whether to remain under the distribution subcommittee or become a part of the power quality subcommittee.

Plans are being made for the T&D Committee to meet in Las Vegas in late January (26-30). The Substations Committee will also attend the meeting. Will most groups be in attendance?

We still need a few new members. If you know of any prospects, please invite them or let me know.

As always, we're looking for a few good presentations for the subcommittee meeting. Think about what you would like to hear. Contact me or the other officers if you have one to suggest.

Charlie Williams has asked to be replaced as Chair - Distribution Maintenance Practices Working Group. We thank Charlie for his efforts in getting that group started. If you have any suggestions on a possible replacement, please let me know.

Offline, I'd encourage all chairs to review their meeting schedules. If there are ways to rearrange things and avoid overlap with some of our other groups, it would be a plus. For example, what about running 1-hour meetings on Monday with no overlap for the 4 groups involved? Will that be too short a timeslot?

Also, task forces can be disbanded if their work is essentially finished. I encourage all working group chairs to notify me if they have task forces that have completed their work.

Finally, please join me in welcoming Antone Bonner of Cooper Power Systems, who agreed to take over as chair for the International Distribution Practices Working Group.

Vice Chair Report - Dan Sabin

Since last January, the subcommittee was assigned a total of approximately 20 transactions-grade papers to review, which is about the same number that we received during the previous six months. We also handled 15 conference-grade papers for the IEEE/PES Summer 2002 meeting.

During the last six months, we migrated from using a review process that consisted solely with email communication to one that uses a central web site managed by IEEE Transactions on Power Delivery. For the most part, I think the transition went smoothly. The web site is located at <http://tpwr-d-ieee.manuscriptcentral.com/>.

The review process begins with me receiving an email message that a particular paper has been assigned to the subcommittee. After that, I can log into the web system and see a list of all the papers that are currently under review that are charged to the subcommittee. At that point, I can assign reviewers from a table that includes everyone who was listed in the membership list of our subcommittee and most of its working groups. I do that by searching by a reviewer's last name. Sometimes I have noticed that someone is in the database twice. That may have happened because more than one subcommittee shares that table, and their name was submitted slightly differently by more than one IEEE Transactions editor. When I have encountered that problem, I have handled it on a case-by-case basis, usually advising the IEEE Transactions Chief Editor of the problem. If I cannot find someone's name, then I can add a new record to the table of reviewer names myself.

When I assign someone a paper to review, an automatic email message is sent to the reviewer that gives the web site's address. If you do not have the original email with your password, or if you have forgotten or lost your password, you can have the system automatically email your password from its main logon page. Your user name is usually the same as the email address to which you received your email inviting you to review the paper. After you logon, you can download the paper to review as an Adobe Acrobat file. You can review the paper offline, and then log back in later to complete the review. You have a number of option buttons to select that allows you to rate the paper's quality and to accept or reject the paper, plus you have text boxes to fill in with the reasons for your option selections. After that, I receive an automatic email message that says you completed the review.

The database system automatically gives you three weeks to complete the review. If you do not complete the review in that timeframe, you begin receiving automatic email reminders from the system. The messages come from my email address, so it looks like I am sending you the reminder, but bear in mind that the database system is sending these notifications automatically.

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I log in periodically to check to see which papers have all the reviews complete. At that point, I read each of your reviews, and then submit the paper's overall review to IEEE Transactions.

Submitted by Dan Sabin, IEEE Distribution Subcommittee Vice Chair

Working Group Reports

System Design - Cheri Warren - Chair

57+ members and guests attended the meeting that began at 8 AM. John McDaniel (mcdanielj@dteenergy.com) who is serving as secretary for the group recorded minutes. Minutes from the 2002 IEEE/PES Winter meeting and the 3/12/02 WEBEX meetings were distributed and reviewed. All of the minutes were approved with the only change being that Joe Viglietta change the wording of his statement of page 2 of the WEBEX meeting minutes. The WG web site can be found at: <http://grouper.ieee.org/groups/td/dist/sd/>. We have asked for a secure area since we are using sensitive information in our analyses. The Task Force on Reliability Reporting is concerned with data collection. The Task Force on Reliability Indices is concerned with surveys and the Task Force on Reliability Indices is concerned with calculations. The EEI Reliability Task Force is concerned with surveys and the two groups have a Liaison between them.

The WG on System Design sponsored a panel session on Monday of the meeting titled “*How to Define Major Events*”. The panelists were Charlie Williams, Cheri Warren, Dave Schepers, Dan Kowalewski, Rich Christie, and Jim Bouford. Cheri then thanked all of the panelists for doing an outstanding job! There were about 100 audience members over the course of the session that ran from 2 to 5 PM. Copies of the presentations can be found on the web site.

TF on Outage Reporting Practices – Chair Dan Pearson - PGE

Dan Pearson (djpl@pge.com) stated that the Task Force paper has been approved by IEEE but has not been published yet. This paper will most likely be presented at the IEEE/PES General meeting in Toronto next year.

Dan stated that the next step for the Task Force was to develop a Guide. This Guide would be similar to 1366, but focus on reporting practices.

Dan then made a presentation, “*Outage Reporting Hierarchy*”, a copy of which can be found on the web page. The main points of the presentation were that utilities now have 1366 but have different methods for reporting outage data. These differences affect indices and make benchmarking difficult.

TF on System Design from a Reliability Perspective - Chair Jim Bouford National Grid

The focus of this group may be changed more to a forum or holding panel sessions. There was a Liaison with S.E.E but it was dropped a few years back. It was discussed that we should redevelop liaisons with this and other groups to get updates from these various regional groups.

There was a discussion around ideas for the next meeting that included the concept that there should be a roundtable on what companies are doing to improve reliability. There was also discussion around holding a panel session at the IEEE/PES T&D Conference (September 2003 in Dallas, Texas). Different topics that were discussed as options for the panel were trees, Animal, Lightning, Equipment Problems and Disaster Recovery. Lightning received the greatest interest, but as the Working Group on Distribution Line Lightning Performance was already planning a panel session on a similar topic, the group decided that it would sponsor a panel titled: ***Distribution Design for Reliability against Equipment Problems***. They also decided to work on the wording to find remove “against” from the title. The following members volunteered to be participate as panelists: George Valdez, FP&L (?) (Cable Work) Dan Pearson PG&E, and Mostafa Hassani, PEPCO, Cable Injection.

TF for Reliability Indices P1366 - Chair Cheri Warren – National Grid

Cheri Warren (cwarren@ieee.org) began the meeting by discussing the step restoration definition (3.1.18). Jim Cheney presented draft language that he developed (copies of which were emailed to the group prior to the meeting). Jim Bouford stated he had the problem with interrupting customers while switching his system back to normal after step restorations (unscheduled planned outages). After the proposed definition was presented, there was a very lively discussion, both for and against it. One of the major points brought out was that during the event customers who were interrupted should be counted only once, but include the total minutes that they were interrupted. Others vociferously argued the opposite point, that customers should be counted each time they are interrupted.

Members discussed the practical aspects of step restoration. It was pointed out that this would be a perfect case for automation (to cut down on outage times). Other AMR issues were also discussed. Dave Schepers discussed Ameren’s system that is fully metered using AMR. Through their system Ameren knows exactly when and for how long customers are interrupted. This system has had an impact on their reliability.

Members discussed the issue that if the customer was back on for 5 minutes and then another outage occurs, then it should be considered a different outage. This would come into play with both faultfinding and URD loop restorations. There was no consensus on this thought. It would have been nice to tie this definition to the momentary event definition, but there is no basis to do so.

A motion was passed for to re-write the definition. Jim Cheney, Larry Conrad and Dan Pearson were to draft this re-write.

Major Event Definition

The Major Event definition was the next topic of discussion. Both the 2.5 and 3 Beta methods were briefly explained.

Some data thresholds were then presented. The group received data from 19 utilities, of which 16 were useful. The size of the utilities ranged from 20,000 customers to 3,500,000 customers. It was pointed out that the thresholds from each utility could not be compared. Each threshold is unique to each utility. From the data sets, the number of MED's (major event days) per year ranged from 0 to 14. The change in CAIDI from raw to adjusted varied from 3% to 46%. The important thing is how much did CAIDI (and the other indices) change. The individual company thresholds are not comparable amongst utilities and are only useful for internal, yearly comparisons.

One company felt that 2.5 Beta gave them too many MED's. The group responded that more MED's just means more explanation about the abnormal days, not a lessening in what is reported. They also asked the company to review index changes in both cases (2.5 and 3 Beta) to see the relative difference in system indices. These two suggestions may highlight the usefulness of this approach.

One member made the comment that one of the major reasons for developing this method, or any method, is to determine what operational stresses there are to the system. Also, the different State commissions should be asking why utilities are performing in a certain way – either well or poorly.

One member compared days classified by the 2.5 beta method with a method developed using GE's 6 σ software Minitab. The result was so close that there was only 1-day difference from the Beta method.

One member pointed out that some are looking for comparable numbers in surveys.

A motion was made to accept the 2.5 Beta Method. The motion passed with 27 for, 5 against and 3 abstained. The group carried the motion to adopt the 2.5 Beta Method for classification of Major Events.

Cheri asked the group to read the 2.5 Beta draft language that was distributed prior to the meeting and provide **comments to her by September 13th**. A copy of this language is posted on the web site.

The group then discussed the draft White Paper titled "*Major Event Normalization*". The mini-group (Jim Bouford, Rich Christie, John McDaniel, Dave Schepers, Cheri Warren, Charlie Williams) drafted a white paper to be used in helping senior management and regulators understand the process and methodology being proposed by this group for classification of major events. The draft white paper was sent to the group prior to the meeting, however, edits were not made during the meeting so as to save time. **Comments should be mailed to Cheri Warren as soon as possible but no later than September 13, 2002.**

The members asked to keep the Cause Code issue open. Also, weather normalization was brought up. Charlie Williams offered to provide a presentation at the next meeting on a weather normalization methodology that he developed.

A new draft (#6) of P1366 will be mailed to the membership within the next few months. Please read, comment using highlighting within word, save the document with your initials at the end, and return to Cheri Warren.

New Business

The group discussed holding panel sessions at either the general meeting in Toronto or the T&D Conference in Dallas. There was some uncertainty about who could attend which meeting since they are 7 weeks apart. The two panel sessions under consideration are:

- Repeat of the Major Events panel that was held at this meeting.
- Panel session from the TF on System Design from a Reliability Perspective

The roundtable was left for the subcommittee meeting. The group adjourned at 11:48 AM.

Switching and Overcurrent Protection - Betty Tobin - Chair

The Working Group convened at 8AM on July 23, 2002. We reviewed and approved notes from the previous meeting

Task Force on Distribution Networks - Betty Tobin - Chair

Members reviewed the most recent updates to the Network Tutorial. Two members will review the entire tutorial and send comments before the next meeting.

Task Force on the Application Guide for Faulted Circuit Indicators - John Banting - Chair

The Draft Guide for Testing FCI's was reviewed and changes were suggested. At present Working Groups at PES and at ICC are addressing this Guide. We agreed that ICC should assume the lead to complete this document, and maintain a liaison with this Working Group. This issue was raised and approved at the Distribution Subcommittee meeting.

Distribution Voltage Quality - Jim Burke - Chair

The meeting was held in Chicago on Tuesday, July 24th. All task force groups met at this meeting. The highlights are as follows:

Task Force on Voltage Flicker – Larry Conrad

The flicker meter standard should be completed by the end of the year. Discussions were primarily concerned with comments sent in by some of the members. There was discussion on the compatibility of the new standard with the traditional GE flicker curve. Concern for “infrequent events” was discussed

Task Force on Custom Power – Dan Sabin

Most of the meeting was spent reviewing draft #8. The majority of discussion centered on corrections and standardizations of the drawings.

The PAR has expired and we will file for an extension next month using the on-line PAR submission form.

Task Force on Sag Indices – Dan Sabin for Michael Sheehan and Math Bollen

The scope of the group was reviewed for benefit of the new attendees. Groups were formed to review chapters 6, 8, and 9. Some of the discussions centered on overlaps with IEEE 1159.1

Others

- No panel sessions are definite for future meetings
- The group was asked to ballot with regard to moving the working groups to the newly formed Power Quality Subcommittee. The balloting was 13 in favor of the move and 7 opposed. Approximately 15 attendees abstained.
- Mr. Burke has requested of Dan Ward that he be removed as chair since he feels it will be difficult to attend both subcommittee meetings and he prefers to remain within the Distribution Subcommittee. The intent is to coordinate the working group activities until next meeting where the new subcommittee can choose a successor.
- P1250 has been reaffirmed.
- Working Group paper – draft #1 “ Statutes of Power Quality and Reliability standards in the US” has been distributed to the members.

Separable Conductors

No report was given.

Distribution Automation - Anil Pahwa – Chair

Kay Clinard called the meeting to order and the minutes of the previous meeting of the Working Group held in New York were distributed and approved.

There has not been any progress in writing text for the tutorial since the members are extremely busy with other activities. There was some discussion on the need for a tutorial on distribution automation. It was felt that it would be nice to offer a high level overview of DA for executives in a tutorial under the IEEE banner. However, writing of the text is the main challenge. Pahwa mentioned that it may be possible to offer it as a short course. He will check on such a possibility.

It was decided not to schedule a working group meeting for Las Vegas since only a few members could attend.

The members present provided their views on the trends on DA. The discussions focused on the following points.

- Reliability is still a large concern, and for some customers momentary interruptions can create significant problems. Utilities should pay more attention to momentary interruptions. Performance based rates will drive automation and reliability improvements.
- Wisconsin Electric Power and a group of vendors have done some work on DA, which could be a possible presentation at the next meeting.
- Not many utilities are doing Var control and thus their losses are high. There is a potential for reducing losses using Var control with DA.
- There is a need for a bulletin board for the working group. The members should be able to post their questions and responses on this bulletin board. Sarma pointed out the IEEE PES has installed a web based virtual community, which could be used as a bulletin board.

International Distribution Practices – Antone Bonner - Chair

Antone Bonner is the new Chair for this Group. The next meeting will be in Las Vegas.

Distribution Maintenance - Charlie Williams – Chair

No minutes are available.

Distribution Generation Integration - Reigh Walling - Chair

Work continues on a working group paper, which will identify issues related to the integration of DG into utility distribution systems.

The working group sponsored a Panel Session that was well attended.

The working group confirmed a commitment to meet in association with the T&D committee in Las Vegas in January 2003.

Liaison Reports

Insulated Conductors

ICC will assume the lead for working the IEEE Guide for Testing Faulted Circuit Indicators. ICC will maintain a liaison with the PES Working Group on Switching & Overcurrent.

Power System Relays

Regional Committees

Surge Protection Devices

Switchgear

Transformers

SCC 21

Standards Activities

ANSI C37.73

ANSI C84.1

ANSI C119.2

NESC

Open Discussion

We will try to have coordination among regional groups using an electronic format. Dave Gilmer will coordinate and can edit out any commercial material.

New IEEE members often find the IEEE structure confusing. They attend meetings but often are not aware of subcommittees, working groups, and task forces. Betty Tobin will put together a draft document explaining these.

Presentation

There were no presentations at this meeting.

Appendix 1: Attendance List

The following tables list the attendees of the IEEE Distribution Subcommittee meeting on July 24, 2002

Table 1: IEEE Distribution Subcommittee Members

Name	Company
Antone Bonner	Cooper Power Systems
Jim Bouford	National Grid
Joe Buch	Madison Gas & Electric
James L. Burke	ABB/ESC
Dave Gilmer	
Dick Hensel	Consumer Energy M-462
Hardev Juj	Seattle City Light
John McDaniel	Detroit Edison Company
Dan Sabin	Electrotek Concepts, Inc.
Frank Stepniak	ElastNameimold/T&B
Elisabeth A Tobin	Seattle City Light
Dan Ward	Dominion Virginia Power
Cheri Warren	Navigant Consulting, Inc.
Total	13

Table 2: Guests

Name	Company
Greg Ardrey	Alliant Energy
Jim Cheney	Arizona Public Service
Ali Chowdhury	Midamerican Energy Company
Andy Dettloff	Detroit Edison
Harry Hayes	Ameren Services
Gil Hensley	Pacific Gas & Electric Co.
Frank Lambert	
Gene Lindholm	Cilco
Carl Niemann	ComEd
Sarma Nuthalapati	Texas A&M University
Anil Pahwa	Kansas State University
Andy Schwalm	Victor Insulators
Total	12

Appendix 2: Panel Session Requests

There were no panel sessions requested for the 2003 WPM. Suggested panel sessions for the 2003 SPM or 2003 T&D conference are:

- Defining Major Events
- System Design from a Reliability Perspective

Appendix 3: Current Membership Roster

The following list presents the 46 current members of the IEEE Distribution Subcommittee.

Chair: Ward, D.J., Richmond, VA
Vice Chair: Sabin, D., Knoxville, TN
Secretary: Tobin, E.A., Seattle, WA

Arndt, D.H., Waukesha, WI
Baker, E.E., Maitland, FL
Banting, J.F., Pewaukee, WI
Barker, P., Schenectady, NY
Buch, J.F., Madison, WI
Burke, J.L., Raleigh, NC
Capra, R.L., Lafayette, CA
Chebli, E.A., New York, NY
Clemons, L.G., Detroit, MI
Clinard, K., Sammashi, WA
Conrad, L., Plainsfield, IN
Ehrlich, R., Kennett SQ, PA
El-Keib, A.A., Tuscaloosa, AL
Gentile, T., Westboro, MA
Gilmer, D., Steamboat Springs, CO
Grainger, J.J., Raleigh, NC
Hensel, D., Jackson, MI
Horman, D.B., Salt Lake City, UT
Kulas, T., Minneapolis, MN
Landman, B., North Hampton, NH
Makal, J.M., Pewaukee, WI
Mancao, R., Lusby, MD

McDaniel, J., Belleville, MI
McDermott, T., Jefferson Hills, PA
Mejdrich, R.E., Citrus Heights, CA
Mukherji, R., Houston, TX
Oedemann, R.J., Philadelphia, PA
Owen, B., Franksville, WI
Pearson, D., San Francisco, CA
Redmon, J.R., West Orange, NJ
Ros, W.J., Schenectady, NY
Sheehan, M.T., Seattle, WA
Short, T., Schenectady, NY
Smith, D.R., Wilmerding, PA
Stepniak, F., Hackettstown, NJ
Tengdin, J.T., San Clemente, CA
Vogel, S., New York, NY
Vollkommer, H., Columbus, OH
Walling, R.A., Schenectady, NY
Warren, C., Albany, NY
Welch, G., Raleigh, NC
Williams, C., Maitland, FL

Appendix 4: Logistical Notes

The following are logistical notes from the meeting:

- The Task Force on faulted Circuit Indicators will no longer meet and will not require a meeting room. Liaison with ICC on this topic will be done through the Working Group on Switching & Overcurrent.
- The Distribution Automation Working Group will not meet at the 2003 WPM.