

IEEE P1409 Custom Power Task Force (15.06.05.01)

Meeting Minutes

IEEE/PES 2002 Summer Meeting
Chicago, Illinois, USA

Tuesday, July 23, 2002, 8:00 AM to 10:00 AM
Palmer House Hilton, LaSalle 2

The IEEE P1409 Distribution Custom Power Task Force met on July 23, 2002 from 8:00 to 10:00 AM. The task force chair, Dan Sabin, chaired the meeting.

Introductions

The chair called the task force meeting to order at 8:00 AM. The agenda was reviewed and modified, and attendees introduced themselves, identifying their names and company affiliations. A total of 19 people signed the attendance list (See Table 1). The current membership database includes 46 members and an additional 188 people who have registered over the years as interested guests. The chair reported that the minutes from the last meeting were posted to the web site last week, as well as draft 8 of IEEE P1409.

Table 1: Attendance List for July 2002 Meeting of the Distribution Custom Power Task Force

Name	Company	Name	Company
James L. Burke	ABB/ESC	Scott Peele	Carolina Power & Light Company
Randy Collins	Clemson University	D. Daniel Sabin	Electrotek Concepts
Larry Conrad	Cinergy Corp	Ambra Sannino	Chalmers University of Technology
Andy Dettloff	Detroit Edison	John Schwartzberg	Silicon Power Corporation
Dave Gilmer	Consultant	Georges Simard	Hydro-Québec
Gil Hensley	Pacific Gas & Electric Co	Rao Thallam	Salt River Project
Brian K. Johnson	University of Idaho	Timothy D. Unruh	Custom Energy
John Kennedy	Georgia Power Company	David Vannoy	Vannoy Consulting
Frank Lambert	Georgia Tech - NEETRAC	Marek Waclawiak	United Illuminating Company
Ray O'Leary	S&C Electric		

Minutes from Last Meeting

The last meeting of the task force was at the 2002 IEEE/PES Winter Meeting in New York City. The chair summarized the minutes from that meeting.

Custom Power Award

The chair first called attention to the announcement of the new Custom Power Award and FACTS Award. The IEEE Power Engineering Society will administer these awards through its Awards Committee and the FACTS and Custom Power Awards Committee. The committee's intent is to give two awards per year (one for FACTS and one for custom power). Individuals will be considered who have made a major contribution to the state of the art of FACTS or

custom power technologies and their applications. For more information, contact Narain G. Hingorani, chair of the FACTS and Custom Power Award Committee at nhingorani@aol.com. See Attachment A.

Review of IEEE P1409/D8

We spent most of the meeting going page-by-page as a group through Draft 8 of IEEE P1409, which was posted to the web site at <http://grouper.ieee.org/groups/1409/> just before the meeting. As we went through the document, we reviewed some of the more controversial changes made in going from Draft 7 to 8, choosing as a group to keep most of them but undid some. The more important activity was in identifying the specific articles or figures in Draft 8 that needed to be completed or modified. Every section and article that is not currently finished now has a task force member charged with completing it. We will follow up the meeting with a summary of the action items in the minutes to encourage quick completion of them. The only chapter that is not close to completion is Chapter 7 on measurements. Several of the task force members thought that it was an oversight that this chapter did not make Draft 8, so it may be possible to obtain that chapter next week. The chair agreed to incorporate this contribution and some changes into Draft 8.1, which was posted to the web site on July 30, 2002.

PAR Renewal

Our PAR expired last month. We will file for an extension next month using the on-line PAR submission form. Jim Burke and Dan Sabin will complete this task.

Next Meeting

Our next meeting will be at the January 2002 meeting being planned by the IEEE Transmission and Distribution Committee in Las Vegas. Nearly all of those in attendance said they would attend. After the meeting, the chair forwarded an email from Dan Ward of the IEEE Distribution Subcommittee with more details on this conference.

Changes in Voltage Quality Working Group

The IEEE Distribution Voltage Quality Working Group (DVQWG) formed the IEEE Distribution Custom Power Task Force in January 1993. This working group was formed by the IEEE Distribution Subcommittee, which reports to the IEEE Transmission and Distribution Committee of the IEEE Power Engineering Society. At the July 2002 meeting of the DVQWG, which followed our task force meeting later in the day, the working group members voted 13 to 7 to join the new Power Quality Subcommittee, which is being formed under the Transmission and Distribution Committee in parallel with the Distribution Subcommittee. At this time, the changes in our parent working group's reporting structure will not impact our primary task, which is to complete IEEE P1409.

Action Items

Table 2: Summary of Action Items for IEEE Distribution Custom Power Task Force from July 2002 Meeting

Action #	Task	Assigned To	Due Date	Completed
2002-01	File for extension of IEEE P1409 PAR	Jim Burke, Dan Sabin	9/1/2002	
2002-02	Email latest draft of Chapter 7 to Dan Sabin	Dave Vannoy	8/1/2002	7/24/2002
2002-03	Incorporate draft of Chapter 7 into P1409/D8.1	Dan Sabin	8/7/2002	7/30/2002
2002-04	Update Figures 4-1 to 4-7 for consistency with the graphing style of the waveforms in the rest of the document.	Dan Sabin	8/7/2002	7/30/2002
2002-05	Update Figures 6-1 to 6-6 to be consistent with graphing style of the waveforms in the rest of the document. Replace the term "phase shift" with "phase jump," which is the term used currently in IEEE P1159.1.	Dan Sabin	8/2/2002	7/30/2002
2002-06	Review last sentence of Section 6.2.1.9	Mark McGranaghan	10/1/2002	
2002-07	Scott Peele to contact Steven Middlekauff on Figure 6-7 and 6-8 for updated changes to SD to SSC.	Scott Peele	9/1/2002	8/8/2002
2002-08	Update Figure 6-9 to be consistent with graphing style of the waveforms in the rest of the document.	Dan Sabin	8/2/2002	7/30/2002
2002-09	Update Figures 8-1 and 8-2 to be consistent with graphing style of the waveforms in the rest of the document.	Dan Sabin, Tom LaRose	8/2/2002	7/30/2002
2002-10	Redraw Figure 5-5 to Figure 5-9 to make them consistent and to improve their clarity	Ray O'Leary	9/1/2002	8/2/2002
2002-11	Send chair a graph for possible consideration as an addition to section 8.1 that graphically summarizes the STS transfers during significant voltage sags and interruptions at a chip manufacturer.	Ray O'Leary	9/1/2002	8/2/2002
2002-12	Provide voltage sag summary statistics from the CEA DPQ Study for Section 4.3	George Simard	9/1/2002	
2002-13	Provide reference information for the CEA DPQ Results. Provide a caption for Table 4-4 that summarizes the date range of the measurements.	George Simard	9/1/2002	
2002-14	Provide better explanation of Table 4-1 and 4-2	Dan Sabin	9/1/2002	
2002-15	Change the caption for Table 4-3 to read "Average THDV Rates for Monitoring Project Locations of EPRI DPQ Project, From 6/1/93 to 3/1/95, Based on 16 Million Three-Phase, Single-Cycle Waveform Snapshots." This is to distinguish it from the 10-minute average values summarized in Table 4-4.	Dan Sabin	9/1/2002	8/4/2002
2002-16	Replace the term "voltage flicker" with "flicker"	Dan Sabin	9/1/2002	8/4/2002
2002-17	Provide recommendation on the terms for "flicker" and "voltage fluctuations" that are consistent with the terminology of IEEE P1453.	Larry Conrad	12/1/2002	
2002-18	Send Visio documents for Figures 5-1 and 5-2 to Georges Simard	Dan Sabin	8/9/2002	8/3/2002
2002-19	Refine Figures 5-1 and 5-2	Georges Simard	9/1/2002	
2002-20	Connect grounds in Figure 5-3 and Figure 5-4	John Schwartzenberg	9/1/2002	
2002-21	Provide reference information on the phase angle jump during faults	Math Bollen	10/1/2002	
2002-22	Change "Preferred Feed" and "Alternate Feed" in Figure 8-3 to "Preferred Source" and "Alternate Source" Add manual switching capability to Figure 8-3	Dan Sabin	9/1/2002	
2002-23	Obtain data points for Figure 8-7 and Figure 8-8 in order to make waveform charts consistent with other waveforms in the document.	Dan Sabin	10/1/2002	

2002-24	Redraw figure 8-9.	Dan Sabin		
2002-25	Obtain data points for Figure 8-11 and Figure 8-12 in order to make waveform charts consistent with other waveforms in the document.	Dan Sabin	10/1/2002	
2002-26	Separate Figure 8-10 into two figures. Try to obtain better version of on line diagrams	Dan Sabin	10/1/2002	
2002-27	Obtain data points for Figure 8-13 and Figure 8-14 in order to make waveform charts consistent with other waveforms in the document.	Dan Sabin	10/1/2002	
2002-28	Obtain one-line diagram for case study in Section 8.2.2	Dan Sabin	10/1/2002	
2002-29	Finish the case study in Section 8.3 from reference B26	Unassigned	12/1/2002	
2002-30	Provide update on custom power park project for case studies	Ray O'Leary		
2002-31	Provide references for IEEE Transactions papers on custom power written by the IEEE/PES Task Force on Simulation of FACTS and Custom-Power Controllers	Reza Iravani	12/1/2002	
2002-32	Complete chapter 7 on Performance Measurements	Chris Melhorn, Dave Vannoy, Russ Ehrlich, Scott Peele	12/1/2002	
2002-33	Complete minutes to Chicago meeting and post to web site	Dan Sabin, Scott Peele	8/8/2002	8/8/2002

Minutes recorded by Dan Sabin and Scott Peele

Attachment A

IEEE Power Engineering Society 2003 Excellence in FACTS and Custom Power Technology Awards

Award Titles: 1. PES FACTS Award 2. PES Custom Power Award

The Power Engineering Society of the Institute of Electrical and Electronics Engineers calls for nomination of outstanding individuals to receive the 2003 PES FACTS Award or the 2003 PES Custom Power Award. Intention is to give two awards per year, one for FACTS and other for Custom Power.

1. Description:

Power electronics and other static Controllers are making a major impact on future power systems through application in transmission, distribution, and small generation. Applications in transmission and distribution include HVDC, FACTS, and Custom Power. Since the introduction of the Flexible AC transmission System (FACTS) and Custom Power concepts, the technology has been moving ahead at an increasing pace. Very significant near to long term benefits of FACTS and Custom Power technologies are now recognized in the industry. The FACTS and Custom Power Awards will be for individuals who have made a major contribution to the state of the art of FACTS and Custom Power technologies and their applications.

The IEEE definition of FACTS is:

“Alternating Current Transmission Systems incorporating power electronics-based and other static controllers to enhance controllability and power transfer capability.”

The IEEE definition of Custom Power is:

“The concept of employing power electronic (static) controllers in 1 kV through 38 kV distribution systems for supplying a compatible level of power quality necessary for adequate performance of selected facilities and processes.”

By these definitions, the FACTS and Custom Power concepts, in addition to the hardware, software and applications work carried out since their introduction, incorporates considerable prior work done on Static VAR Compensators and other static Controllers.

2. Administration:

The IEEE Power Engineering Society will administer these awards through its Awards Committee and the FACTS and Custom Power Awards Committee.

3. Eligibility:

Individuals, who have made a major contribution to the state of the art of FACTS or Custom Power technologies and their applications, will be considered. A nomination must be for one or

the other award, FACTS or Custom Power depending on where nominees accomplished most. It is recognized that there is overlap in various power electronics technologies and pioneering engineers are apt to be involved in more than one area. Therefore, the nomination for one or the other should also state accomplishments in the other areas of power electronics. The Award Committee may decide not to give either award if no qualified candidate is nominated.

4. Selection:

Factors to be considered in selecting the FACTS and Custom Power Awards include:

- The candidate's contribution(s) to FACTS or Custom Power technology.
- Originality or innovative nature of the contribution(s).
- Impact of the contribution(s) on FACTS or Custom Power technology and its applications.
- List of significant publications in FACTS or Custom Power.
- Candidate's stature in FACTS or Custom Power.
- Achievements in other fields or power electronics technologies.
- Professional activities or involvements.

Nomination Procedure:

A nomination (1 hard copy duly signed and email) written in English, along with at least four supporting recommendations must be received as a package by the Chairman of the FACTS and Custom Power Award Committee on or before January 31, 2003. These nominations will be considered for the award planned to be made during the IEEE Power Engineering Society Meeting. The above listed selection factors should be carefully considered during preparation of nominations and recommendations. They must be complete and provide sufficient information to establish the candidate's contribution(s) and role in FACTS or Custom Power technologies. Nominators are encouraged to format the nomination package in sections addressing each of the factors bulleted above. Each supporting letter of recommendation should not exceed two pages.

The Award:

The FACTS or Custom Power Award consists of a plaque, and an honorarium of one thousand dollars.

Narain G. Hingorani, Chairman FACTS, and Custom Power Award Committee
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