IEEE 1250 Working Group
Web Conference Meeting Minutes
September 19, 2006 1100AM-1200PM Eastern Time

Attendees:

1. Randy Collins, Clemson University
2. Russ Ehrlich, Pepco Holdings Inc., **WG Vice-Chair**
3. Mark Halpin, Auburn University
4. Dennis Hansen, Pacificorp, **WG Chair**
5. Fred Hensley, **WG Secretary**
6. John Kennedy, Georgia Power
7. Albert Keri, American Electric Power
8. Bill Moncrief, Hood Patterson Power
9. Marty Page, Georgia Power
10. Dan Sabin, EPRI Solutions
11. Bob Saint, National Rural Electric Cooperative Association
12. Rao Thallam, Salt River Project

AGENDA ITEM A (Call to Order, Housekeeping)

1. Meeting called to order by working group chair Dennis Hansen, and hosted via the Pacificorp Teleconference system. Meeting structure utilized the agenda produced and distributed in advance.
2. After attendee introductions were completed, Dennis Hansen reviewed the two relevant IEEE slides regarding patent policy and inappropriate discussion topics.
3. Chanh Viglione from National Grid requested to be removed from the Voltage Quality working group membership and email list.
4. A question was raised concerning specific IEEE contacts. Sherry Hampton is the IEEE point of contact regarding PAR questions, and Jenny Steinhagen (sp?) regarding editorial questions.

AGENDA ITEM B (Minutes from Previous Meeting)

1. Minutes from the June 20th meeting in Montreal were reviewed and approved by the attendee WG members.

AGENDA ITEM C (Progress Reports on Action Items)

1. Russ Ehrlich and Fred Hensley distributed the individual clauses (chapters) from the current IEEE 1250 to the various clause chairs. No response yet from the clause chairs.

AGENDA ITEM D (Welcome to Dave Mueller, IEEE 1250-D2 progress)

1. Russ Ehrlich believes the definitions (nominal references) to be very straightforward. A question was raised regarding whether we needed a separate definitions clause. After some discussion, the wg attendees agreed to keep a placeholder for the definitions clause should it be needed.
2. There are no further changes to the latest revised scope and purpose sections.

3. Clause 4 is currently undergoing rewrite and revision. It is currently entitled, "Electrical Environment". Since there are no plans to discuss the customer side of the electrical environment, there was a suggestion to change the title to "Utility Electrical Environment". A request was raised that this clause address issues originating from the customer side, such as motor starts, which have the same symptoms as problems originating from the utility, but instead are internally generated within the customer facility.
4. Clause 5 will combine elements from CBEMA, ITIC, and SEMI-F47 tolerance curves. Mark McGranaghan was unable to attend this web conference, so there was no new information or updates regarding clause 5.
5. Clause six is awaiting consideration of some IEC 61000-4-30 information from Alex McEachern to Randy Collins. Russ Ehrlich agreed to email Alex M. and coordinate with Randy Collins.
6. Concerning clause 7, Dennis Hansen suggested it might include types of service for varying tiers of reliability. Since different tiers of reliability have varying rates and/or tariffs, this might be helpful to discuss, especially when serving hi-tech companies.
7. Russ Ehrlich will take care of clause 8, and Dennis agreed to take care of clause 9.
8. Regarding the questionnaire, Rueben Birch will send some comments, and Mark Halpin suggested adding a table. Fred Hensley will put together a web version of the questionnaire with a target date of December 4th. Dan Sabin and Fred Hensley will oversee obtaining and analyzing the web questionnaire results. Andy Sagl had also volunteered to assist as needed.

AGENDA ITEM E (New Business)

1. Dennis discussed the big picture of "Reliability" versus "Quality", and how they fit together. He produced and presented a chart which might prove helpful for comparing the two concepts. A copy of that chart is included in these minutes.
2. A question was raised as to which clause of the revised 1250 should contain the questionnaire results. After some discussion, attendees agreed those results should be placed within the benchmarking clause.
3. The PAR for IEEE 1409 will be withdrawn and resubmitted by October 16th.

AGENDA ITEM E (Action Items and Next Meeting)

1. Clause chairs to send latest drafts of their respective clauses to Russ Ehrlich by October 18th, 2006.
2. Russ Ehrlich to review and combine individual clauses, returning a consolidated draft document to the clause chairs by October 31, 2006.
3. Russ Ehrlich to send his email address to John Kennedy.
4. Fred Hensley to update voltage quality working group membership and attendance list.
5. The next scheduled working group meeting will take place at the 2007 IEEE PES Joint Technical Committee meetings in Orlando Florida, January 8-10.
6. Russ Ehrlich to email Alex McEachern and coordinate with Randy Collins concerning clause 6 and IEC 61000-4-30.

7. Dennis Hansen to help Russ Ehrlich with clauses 8, 9, and glossary as needed.
8. Rueben Birch to send comments regarding questionnaire to Dennis Hansen.
9. Fred Hensley targeting the web version of the questionnaire to be ready for review by December 4th.
10. Dan Sabin and Fred Hensley to oversee obtaining and analyzing questionnaire results.

AGENDA ITEM F (A Voltage Quality Story)

Due to time constraints, this agenda item was skipped.

The web conference was adjourned at approximately 12:15 PM ET.

---------- Begin Dennis Hansen "Reliability" versus "Quality" chart ----------

Summary Diagram of Electric Power Reliability and Quality

Descriptions	Formal Electric Utility Reliability						Formal Power Quality				
	Traditional Utility Reliability				Industrial Process Reliabilty (and Residential/Commercial Nuisance)		Narrow Power Quality				
	Sustained Interruptions							Waveform Distortion			
	Underlying Events			Major Events	Momentary Interruptions	Sags (Dips)	Light Flicker	Harmonic	Interharmonic & Resonance	Transients, Noise, and Other	RMS Levels and Imbalance
	Area	Circuit	Customer	Area							
Metrics	SAIDI/SAIFI	CMI	CEMI	2.5 Beta	NI (< 5 min.)	IEC X-4-34	Pst	TDD			ANSI C84.1 Limits
	CAIDI	CI	NI	CAIDI	MAIFI	SARFI	Plt	THDv			
	ASIDI/ASIFI	Combined			Combined	SEI	dV/V	Indiv. H.			
Initiatives	Vegetation Mgt.	Fuse/Rly Coord.	Daily "Find & Fix" Program	Storm Hardening	Slow or Block Inst. Trips	EPS-based Proactive Analysis					Voltage Charting
		Network Initiatives									
	SAIDI Reduction	Facility Repair Program			Plant Immunity			Harmonic Studies	Resonance Studies	EMTP Studies	Planning Studies
Feedback	SCADA & DFR Monitoring					Power Quality Monitoring (PQM) System					Voltage Monitors
	Area/State Reports	Circuit Reports	Customer Complaints	Customer Feedback	Customer Complaints		Customer Complaints				
Tools and Reports	Reports from Outage Reporting System	Hot Spot Tool		Ad Hoc	Trip Report		Consult. EMTP Flicker Models	Common Engineering Model Database (XML-based)			
		Facility Inspection Report			"Find & Fix" Tool			Harmonics Modeling	Harmonics Modeling	EMTP	PSS/E

Items in yellow are being used, and need to be improved. Rev 0: 9-19-06

Items in blue are NOT currently being used, and require some development. Initial IEEE Draft

---------- End "Reliability" versus "Quality" Chart ----------

---------- Begin Updated Draft Questionnaire ----------

DRAFT 1.0

IEEE PES Voltage Quality (1250) Working Group

2006 Confidential* Questionnaire on Utility Voltage Quality Practices

~~If you are responding to this questionnaire electronically (preferred), please set your word processor to OVERWRITE mode (as opposed to INSERT mode) prior to filling in a blank. Respond to multiple choice questions by either underlining the chosen answer (electronic) or circling the letter of the chosen answer (handwritten).~~

Utility
Name_____
__

Region_____
Country_____

Optional Contact Information of person filling in questionnaire: We need this, but word it like "name if not completed by the person to whom originally addressed" or something.

Name_____

Email address_____

- What continuous (steady-state) voltage standard does your utility adhere to for distribution customers?
  - ○ ANSI C84.1 or very similar
  - ○ EN 50160 or very similar
  - ○ Custom standard generated by utility
  - ○ Custom standard generated by regulators
  - ○ Other, please explain in 2. below.

- If your continuous voltage distribution standard is not ANSI C84.1 or EN 50160, what are the limits?

- How do you define continuous or steady-state voltage in the standard you use? Please quote language if other than ANSI C84.1 or EN 50160.

- What continuous voltage standard does your utility use for customers taking delivery of power at transmission or sub-transmission voltages above 34.5 kV? Please describe.

- What are your transmission planning standards, in percent, for voltage regulation on looped lines? On radial lines?

Not sure we need this – might require more than one person in the company to answer the survey if we include transmission standards. – Mark M.
And, need to define the terms if you include this question.

- What standard do you use for voltage unbalance for voltage-regulated service to customers?
  - ANSI C84.1 or very similar
  - EN 50160 or very similar
  - Custom standard, please explain.
  - Other, please explain.

- What is your transmission planning standard, in percent, for voltage unbalance? If different by kV class, please explain. This becomes a table

Voltage class (KV)	Voltage unbalance planning standard (%)

- Please indicate with a *check mark* the type of additional power quality standard your utility adheres to. Also please include the number of the standard. If you use a custom standard please describe in more detail below, or attach a copy of the standard.
  - Voltage fluctuation and light flicker___. We use the following standard:_____.
  - Harmonic distortion___. We use the following standard:_____.
  - Voltage sags___. We use the following standard:_____.
  - Other, please explain.

Instead of question 8, include the table on the next page.
The table is a good idea, Figure a way to do that.

If possible, summarize your voltage quality standards and assessment requirements in the table below.

Reliability/Quality Characteristic	Indices Used	Standards for Performance	Performance Requirements	Assessment/ Verification of Compliance
Reliability - Number of Interruptions				
Reliability - Duration of Interruptions				
Momentary Interruptions				
Voltage Sags				
Harmonic Distortion				
Unbalance				
Flicker/Voltage Fluctuations				
Voltage Regulation				

---------- End Updated Draft Questionnaire ----------