

IEEE Standard 1159
Recommended Practice on Monitoring
Electric Power Quality

Meeting Minutes
June 19, 2006

The meeting was opened at 3:12 p.m. in room 516b of the Montreal Convention Center (Palais de Congres), in Montreal, Quebec, Canada. The meeting was delayed in starting to allow people to attend other meetings, and the meeting utilized the time slot previously slotted for the 1159.1 meeting.

The meeting was attended by 17 persons. The meeting attendance is available.

The chair discussed that members of the committee should update their information on the IEEE server on the "My Ballot" area of the server. Make sure to select 1159 so you will be eligible for voting on the standard. Instructions are below:

- Log onto www.ieee.org.
- Click the Standards button.
- Choose "Develop Standards."
- Choose "Become a Member of a Balloting Group."
- Choose "MyProject."
- Log in (use your regular IEEE login)
- The direct link is:
<https://development.standards.ieee.org/my-site>
- Then after some steps, you can get yourself on the rolls.
- Choose "Select Activity Profile."
- Roll down and click the "+" on the Power Engineering Society Roll down and click the "+" on Transmission and Distribution.
- You will see several items open up.
- One of them is "Working Group for Monitoring Electric Power Quality."
- Click the "+" next to this label.
- You will see "IEEE Recommended Practice for Monitoring Electric Power Quality."
- It is recommended that you check the box on both of these (Working Group and Recommended Practice).
- You can navigate around and choose anything else you are interested in. Note that some of the

Power Quality-related items are under SCC-22 and not T&D. Some items don't appear to be listed and other items are not where you might expect them to be.

- Hit "Continue" at the bottom after you've selected the items you want.*
- You will get an email confirming your actions.*

The standard IEEE Standards Activities' disclaimers were read and presented to the working group.

The minutes from the previous meeting were presented and approved by the group. The title of the meeting minutes need to be changed to represent Standard 1159, NOT 519. Otherwise the meeting minutes are approved.

Tim Unruh will take over the role of the Vice-chair, replacing the efforts provided by Dave Vannoy.

The PAR has been approved, with only some minor changes to working of scope and purpose. It was approved March 30, 2006. The chair provided some discussion regarding this approval, and showed the summary provided through the IEEE website.

The chair then discussed the status of the draft. Draft 8 has been distributed both in paper and electronic copies. Items still that need to be resolved are highlighted in yellow. Each chapter chair needs to look at the comments to see that they are resolved.

The definitions will be the primary focus of the meeting today. Furthermore, the bibliography needs significant work. Each chapter chair is to review their references, and then provide an updated bibliography for their chapter to the committee chair. Along with the bibliography, the reference tables of standards needs to be updated. Finally, the annexes need work.

Within the definitions section, it was decided that the only "indispensable" standard that should be listed in the Normative References section was IEEE standard 100, the Standard Dictionary of Electrical and Electronic Terms, 7th Edition.

Definitions Discussion

Definitions that are found in Standard 100 need to be placed in the glossary (called Annex A in our document). If a term is new, then it can appear in the definitions list, but it should not conflict with a Standard 100 entry. If we want to change a definition that is found within Standard 100, a question will be raised, but Mark Halpin explained that there is no rule requiring that the definitions are found in Standard 100 – it is desired, but not required. If our definition is a rewrite of an existing definition, then the Standard 100 committee will update the definitions of Standard 100 with the new updated information.

The chair would like to avoid ballot problems, and is concerned regarding the definitions causing such. He has offered it up to the committee to review the definitions and reach final consensus on the final definition.

Tom Gentile expressed an interest that all definitions used within the power quality committees be consistent. The chair felt that standard 1250 might help out with this. Tom Gentile felt that if our entire group was consistent with definitions, that it would give us greater leverage in dealing with other standards making organizations.

Some specific definitions were discussed:

- Term – Accuracy – selected the IEEE 100 definition.
- Term – Accuracy Ratio – remove definition from document.
- Term – Calibration – selected the IEEE 100 definition, items #3, 4, and 5.
- Term – Commercial Power – remove definition from document.
- Term – Coupling – selected the IEEE 100 definition.
- Term – Current Transformer – Use the IEEE 100 item #2 definition.
- Term – Dropout – remove definition, and then remove references to word in document (at least 2 locations).
- Term – Dropout Voltage – remove from document.
- Term – Electromagnetic – Using IEEE 100 definition #2
- Term – Electromagnetic Disturbance – selected definition #2 from IEEE 100.
- Term – Electromagnetic Environment – remove from document.
- Term – Equipment Grounding Conductor – selected the IEEE 100 definition.
- Term – Failure Mode – selected definition #2 of IEEE 100.
- Term – Flicker – keep 1159 definition that is in document, as it matches IEC definitions. The IEEE 100 definitions for this term were not quite accurate.
- Term – Frequency Deviation – definition #5 of IEEE 100.
- Term – Fundamental [Component] – use the 1159 definition, as the IEEE 100 standard uses the term in the definition. Also, as “e.g.” to the frequency listed in this definition.
- Term – Ground – use IEEE 100, as it is essentially the same as found in 1159.
- Term – Ground Loop – use IEEE 100 definition, definition #2.
- Term – Harmonic Component – IEEE 100 definition.
- Term – Harmonic Content – remove this term, reword the document as necessary.
- Term – Immunity – same in both documents (1159 and IEEE 100).
- Term – Interruption (all of the variations) – go back to old notes and see what direction was taken in 1159 previously. Much discussion regarding this definition, and general desire was to keep present 1159 definition, rather than use the IEEE 100 definition.
- Term – Isolation – same as IEEE 100.
- Term – Momentary – same as IEEE 100.
- Term – Noise – essentially the same as IEEE 100, however, some changes are present in the IEEE 100 definition, adopt the IEEE 100 definition.
- Term – Nominal Voltage – same as IEEE 100.
- Term – Nonlinear Load – same as IEEE 100.

Term – Normal Mode – use IEEE 100.

Term – Notch – same as IEEE 100.

Term – Oscillatory Transient – same as IEEE 100.

Term – Over Voltage – same as IEEE 100.

Term – Phase Shift – same as definition #4 in IEEE 100.

Term – Potential Transformer – same as IEEE 100.

Term – Power Disturbance – same as IEEE 100.

Term – Precision – remove from document.

Term – Pulse – use definition #4 of IEEE 100.

Term – Random Errors – remove from document.

Term – Sag – same as IEEE 100.

Term – Shield – use IEEE 100.

Term – Shielding – same as IEEE 100.

Term – Slew Rate – remove from document, not used in document.

Term – Sustained – same as IEEE 100.

Term – Swell – use definition #3 from IEEE 100.

Term – Systematic Error – remove from document, not used in document.

Term – Temporary Interruption – remove, since it will be included under interruption definition.

Term – Tolerance – remove from document.

Term – Total Demand Distortion – use IEEE 519 definition.
Note: In Table 7-2, change “Point of Common Coupling” and service entrance to (e.g.) “in front of service entrance”.

Term – Total Harmonic Distortion – put formula into definition, use IEEE 519 definition

Term – Traceability – remove from document.

Term – Total Demand Current – use IEEE 519 definition.

Term – Point of Common Coupling – use IEEE 519 definition.

Term – Transient – use definition #7 from IEEE 100.

Term – Unbalance – make note that imbalance and unbalance are used synonymously.
Must do some work on unbalance.

Term – Undervoltage – use the same definition as IEEE 100.

Term – Voltage Distortion – use the same definition as IEEE 100.

Term – Voltage Regulation – use the same definition as IEEE 100.

Term – Waveform Distortion – use 1159 definition, as IEEE 100 does not apply.

A proposed sequence of events was planned at the meeting to occur:

- Tim Unruh update the membership roster on the list-serv
- Tim Unruh coordinate update of IEEE membership list
- Chapter Chairs – to review their chapters and correct any issues and provide bibliography updates – return any corrections to Randy by August 1, 2006
- Ballot invitation to occur August 1, 2006
- Chair will pull corrections together by August 15, 2006
- Chapter Chair meeting on Thursday September 7, 2006 to discuss the draft
- Items need correction due to Randy by September 17, 2006
- Randy updates draft with those items and transmit to IEEE Standards Assoc. for Mandatory Editorial Coordination by September 27, 2006

- Target Ballot Date October 27, 2006, give 45-60 days to respond
- January Meeting in Orlando will be dedicated to dealing with ballot comments and resolutions.

Chapter Chairs

Chapter 1 –

Chapter 2 –

Chapter 3 –

Chapter 4 – Eric Gunther

Chapter 5 – Tom Gentile

Chapter 6 – Rich Bingham

Chapter 7 – Tim Unruh

Chapter 8 – Russ Ehrlich

Annex B – Randy Collins