

Proposed IEEE Std. P1159.1
Task Force on a Guide for Recorder Qualification and Data Acquisition Requirements
for Characterization of PQ Events

Meeting Minutes

Meeting Date: 13 July 1998
Location: San Diego, CA
Purpose: Develop format and content expectations for TF Guide Book
Attendees: Roger Bergeron, Dan Sabin, Alex McEachern, Erich Gunther, Greg Rauch, Andy Detloff, Larry Ray, Richard Bingham, Scott Peele, Peter Shah, James Wikston, Randy Collins, Larry Morgan, Gil Hensley, Wayne Hinkson, Marek Waclawiak, Henry Pinto Jr., Ivan Manendez, Paul Ortmann, Tony St. John, Mike Sheehan, Tom Blooming, Bill Moncrief, Tom Key, Mark McGranaghan, Kevin Curtis, Rao Thallan, Stephen Middlekauf, John Oneill, Fouad Dagher, Jerry Olechiw, Van Wagner, Milan Graovac, Ram Mukherj, David Duffy, Greg Ardrey, Joe Wilson, Joe Koepfinger, David Kreiss, Mark Kempker, Mark Halpin, Tom Short, Thomas Schneider, Shashi Dewan, Reza Iravani, Bill Howe, David Vannoy
Author: Daniel Brooks

The meeting was called to order by chairman Roger Bergeron.

Agenda

Daniel Brooks distributed the agenda developed by Roger. Alex McEachern moved that the IEC coordination item be moved up on the agenda to the opening discussion. Roger and group agreed.

Discussion of Coordination with IEC 77A WG9

Alex McEachern introduced the scope of the PQ measurement protocol being developed by the IEC 77A WG9 and suggested that the IEEE group should harmonize closely with the work of the IEC group. Alex stated that WG9 is to have a draft guide prepared by 2/99. It was noted that the work of the IEC 77A WG9 can be reviewed at the following URL:

<http://www.dranetz-bmi.com/wg9/>

It was noted that there may be necessary differences due to the differences in the electrical environments under which the majority of members from both groups operate. After a brief discussion, the group agreed that harmonization to the extent possible is reasonable and desirable. Larry Morgan commented that coordination with WG9 would only apply to the IEEE 1159.1 TF (measurement protocol) and not to the IEEE 1159.2 TF (characterization).

Alex M. made the following motion:

To the extent possible, the Proposed IEEE Std. P1159.1 Task Force on a Guide for Recorder Qualification and Data Acquisition Requirements for Characterization of PQ Events will harmonize with the IEC 77A WG9 PQ measurement protocol guide.

The motion passed.

Domain Chair Reports

Transients – Rich Bingham

Rich briefly presented the instrument class/characteristic matrix for transient measurements which he developed. Rich stated that there needed to be more discussion regarding the matrix.

Short-Duration RMS Variations – Dan Sabin

Dan reported that before the next meeting, he will complete a project which will analyze the DPQ rms variation database for sensitivity of the characterized magnitude and duration as a function of the sampling rate. Dan will do this by comparing the calculated magnitude-duration values as the points per cycle are reduced from the total 256 available. Dan expects this data to feed into the group guide.

Long-Duration RMS Variations – Cheri Warren

No report.

Voltage Imbalance – Doug Dorr

No report.

Waveform Distortion – Alex Emanuel

No report.

Power Frequency Variations – Greg Rauch

Greg requested that the topic of measurement uncertainty for frequency variations be discussed. Roger stated that he would stimulate the discussion with a presentation later in the meeting.

Voltage Fluctuations - Tom Key

Tom stated that the IEEE should harmonize with the IEC flicker measurement protocol and IEEE 1453.

General Measurement Protocol Presentation

Roger Bergeron began a presentation stating his intentions regarding the protocol for each of the phenomena domains to be covered in the document. Roger's presentation of his thoughts on steady-state measurement windows generated the following discussions:

- The IEC 12-cycle window is a result of the desire to characterize interharmonics
- Roger proposed the IEC WG9 method that states 1-cycle measurements must be comprised of at least 200 points per cycle. Greg Rauch poised the question as to whether this was necessary for all steady-state measurements. Rich Bingham stated that such a restriction violates the general intent of the group define protocols for classes of instruments having varying degrees of accuracy. This led to a broader discussion of defining an error specification for the measurement algorithm utilized by an instrument. Roger stated that the maximum error defined by IEC is 0.1%. It was noted that this error specification is based on the IEC definition of an interruption which is < 1% which is not the IEEE 1159 definition of <10%.
- Roger proposed limits for frequency accuracy also. The discussions of limits for accuracy led to a broader discussion of whether instrument classes were being abandoned. Alex McEachern stated that the general consensus of the attendees were not in agreement with the accuracy limitation proposed by Roger Bergeron.

Discussion of Instrument Classes

Alex MacEachern discussed the 2 instrument classes on which the IEC WG9 is focusing:

1. Reference instrument which is associated with the accuracy limits discussed previously during Roger Bergeron's presentation.
2. General utility assessment instrument.

Gil Hensley requested that the definitions of the two IEC instrument classes be circulated. Alex McEachern agreed to post this information on the Web site. Daniel Brooks agreed to send an email notifying all members as to when this information is available and the URL at which it can be reviewed.

Discussion of Timeline for Production of Guideline

A discussion of the PAR deadline was initiated by Larry Ray. Larry stated that the PAR called for completion of the guideline by end of 1999. This fueled discussion that coordinating with the IEC was desirable due to the fact that would have a draft by February 1999. Van Wagner stated that it was more important for the group to develop a document representing the consensus of the group membership than to meet the PQR deadline or harmonize with the IEC. Gil Hensley proposed that we extend the PAR deadline. Larry Ray agreed to investigate the possibility of revising the PAR.

Roger stated that he wants to have a first draft of the IEEE guideline by the winter meeting in New York. He requested that all domain chairs send him a draft of their topic by SEPTEMBER 15. Roger stated that any sections for which he does not receive a draft, he will insert the IEC 77A WG9 text for the first aggregate draft of our guideline.

Next Meeting

The next meeting is in New York during the winter meeting January 31 – February 4, 1999.