

Unapproved Minutes
IEEE/PES Transformers Committee
Standards Subcommittee Meeting
March 9, 2010 Houston, Texas, USA

1. Opening Remarks

- a. Chair, William Bartley summarized the recent activities at the ADCOM meeting that resulted in the approval for issuance of **Transformers Committee Organization & Procedures Manual – April 2009** to the PES. The O&P Manual is posted on TC website (Link is: www.transformerscommittee.org/info/OPMan04-2009.pdf).
- b. A new P&P Manual for Working Groups is being prepared and should help in the Chairs conduct meetings.
- c. The S10 Standards Luncheon - “Back to Basics” will provide a use reference for the frequently asked questions <http://www.transformerscommittee.org/info/S10/S10-StandardsLuncheonPresentation.pdf>
- d. The IEEE TC requirements to have quorum present was reiterated.

2. Meeting Attendance

The Standards Subcommittee met on Wednesday, March 9, 2010, at 4:30 PM. A preliminary count of members (by hand raised, if believed to be member) showed 25 members in attendance. (At the meeting this was not believed to be a quorum; however, business as usual was conducted). The meeting roster was circulated.

Postscript – After the meeting a verification of the roster and role status regarding members was conducted and subsequently verified that a quorum was NOT present.

3. Approval of previous meeting minutes

Vice Chair motioned asked if there were any comments or corrections to the previous meeting minutes. There where no comments to meeting minutes from the Fall 2009 meeting in Miami, Florida, even though approval could not be obtained due to lack of quorum.

4. Working group reports.

- a. **Cont. Revision of C57.12.00 – Steve Synder** reported the present status as ballot resolution continues, and that shortly the standard would be re-issued for recirculation. The following summarizes the balloting:
 - Initial ballot – Open / closed Oct 2008; 193 Ballot Pool, 208 Comments, 14 negative Ballots
 - 1st Recirculation - Open / closed Dec 2009; 144 Affirmative (95% Approval rate), 32 Comments, 7 negative ballots (6 old and 1 new)
 - 2nd Recirculation – Opened / closed March 2010.

A new Par was approved Jan 23, 2010 to align changes to title and scope with document.

- b. **Cont. Revision of C57.12.90-2006 – S. Antosz-** The status of C57.12.90 is effectively ready for joint recirculation with C57.12.00. The single negative ballot from last recirculation hopefully will change at the next recirculation.
- c. **PC57.12.70 Terminal Markings Revision – S. Shull** – A quorum was present 7 of the 8 members. Prior minutes were approved. Steve Shull gave a review of examples from a paper presented at 2006 Protective Relay Conference by Lawhead, Hamilton & Horak and asked again for attendees to check with manufacturers for examples that might be using. Chuck Simmons pointed out in example 4 the phase shift should be shown as 30° positive. The working group was in agreement with Chuck and Steve stated that he would make the change. Charles Sweetser offered to provide diagrams that he had developed during his testing of transformers that cross references US vector notation to the IEC clock method. Chuck Simmons agreed to check with Sheldon Kennedy on the Semiconductor Rectifier Transformers PCS57.18.10 to provide additional examples that demonstrate multiphase outputs that can be delivered from other types of transformers. Steve volunteered to incorporate changes submitted by members and guests before the next meeting. The IEC clock method should be helpful to North America users and there is time to complete with Par Expiration being 31 Dec. 2011.

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- d. **PC57.12.80 – Terminology for P & D Transformers – B. Chiu** The ballot comment resolution is nearing completion. Shortly after the meeting the ballot comment resolution spreadsheet showing the listing of comments and the details of the proposed resolution will be sent showing the changes that have been incorporated. This will be Draft 4. Your help to review the changes prior to sending this out for recirculation.
- e. **WG on Revision of IEEE C57.152 (old 62) –Jane Verner** – Working Group held 7th meeting. A quorum was (34 of 55) members present with total of 48 attending. No patents related to work were identified. The Fall 09 meeting minutes were approved. Oleg Riozman efforts on moisture in oil were noted. Committee membership was reviewed with regard to quorum rules. Draft 4.0 was issued and has been posted on the web. Volunteer assignments to review the various sections were made during the Fall 2009 meeting and are included on a separate spreadsheet. The spreadsheet has been updated to show progress: Induced Testing (need to add testing voltage levels and Ajith Varghese has now volunteering to assist John Herron); Safety Additions and Insulation Resistance need a volunteer to review; DGA (Poorvi Patel agreed to review). Discussion included the Diagnostic Tests for Transformers, Reactors and Regulators as well as the Test Chart Commissioning, In-Service and Post Faults. On both charts it was agreed that the order of testing should be considered and reflected in the tables. Updated charts, the DFR Annex Section 6.1.2 - Ratio/Polarity/Phase a team comprised of John Herron, Jeff Foley Paul Salvato and Peter Werelius are continuing to work on a chart. A separate web meeting will be held to discuss further. The next web meeting will be held on May 5, 2010 at 11 AM EST
- f. **TASK FORCE on IEEE-IEC CROSS REFERENCE – J. Sim** - the following progress was reported that a quorum was not present (25 attendees, 8 members, and 17 guests with 1 requesting membership).

Discussed when the IEEE-IEC Cross reference will be updated and published. The most important documents are IEC 60076-1, C57.12.00 and C57.12.90. The cross reference will be published after these 3 documents are updated.

Progress to date follows as:

- IEC 60076-1/C57.12.00/C57.12.90 – Ajith Varghese and Vinaj Mehrotra completed their assignment. May need to be updated when FDIS is issued for IEC 60076-1
- IEC 60076-2/C57.12.00/C57.12.90 – Hasse Nordman to complete after 76-2 publication
- IEC 60076-3/C57.12.00/C57.12.90 – Revision of 76-3 has just started.
- IEC 60076-6/C57.16/C57.21/IEEE 1277/C57.32 – Richard Dudley

The complete project list and assignments will be posted on the TC webpage.

For IEC documents being updated, FDIS stage is probably safe to do the comparison with IEEE documents. There was no new business. The complete project list, cross reference list and assignments will be available in the folder for the Task Force on IEEE-IEC Cross.

- g. **TASK FORCE on IEEE-IEC Harmonization – Jeewan Puri** - The following scope provided to TF for comments:

Scope: In view of the globalization of the transformer industry, this Task Force has been formed to develop clear pathways toward developing harmonized standards to meet the needs of the future. The efforts of this task force will be focused on the following:

- Define clearly as to what the harmonization of standards is supposed to accomplish.
- Develop rules and guidelines for harmonizing a standard in part or in its entirety. This will include defining the objectives, deliverables and the proposal process for obtaining authorization from the IEEE and the IEC standards making bodies.
- Identify the organizations that should be involved in channeling the flow of information to and/or from IEEE and IEC standards.

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- Define a streamlined process for using copyrighted information from IEEE and IEC standards.
- Define procedures for maintaining and updating harmonized standards.

The task force will publish a position paper summarizing the harmonization process, its deliverables and benefits to the industry

The TF discussed the outline of the position paper. This outline was designed recognizing Harmonization as a goal that can be achieved by either Partial Adoption or by producing a Dual Logo document to accomplish the following:

- Remove conflicts in the technical content.
- Make transformers manufactured with IEEE and IEC standards globally acceptable.
- Make performance requirements compatible.
- Make test procedures compatible.
- Remove technological conflicts between IEEE and IEC standards.
- Adopt new technologies developed in the IEEE and / or IEC working groups.

It was proposed that the process involves Preparing formal Harmonization approval request form IEEE and IEC. This request describes the reasons, benefits and the process (Partial Adoption or Dual Logo) through which Harmonization will be achieved. Once the project approval has been obtained, the WG responsible for the harmonization should be given the complete control of the documents.

It was suggested that the harmonizing process should in no way jeopardize the local relevance nor the development process used at IEEE and IEC. These standards should therefore be maintained according to the way they were Harmonized. The standards that are harmonized through Partial Adoption should be locally controlled since their use is local. The standards that are harmonized through joint development as Dual Logo are for international applications and should be controlled jointly.

Ms. Jodi Haasz pointed out that this approach will involve changing the present agreements and philosophies at IEEE and IEC. Mr. Paul Jarman (Chairman IEC TC14) supported the idea of changing the present operating procedures for making the harmonization process more flexible and streamlined. It was agreed that Jodi Haasz, Paul Jarman and Bill Chiu will review the attached outline and prepare it for further action and circulation to the TF.

5. Old Business

No old business was raised.

6. New Business

A new business question was raised regarding when is a new "PAR" needed? The process was explained by the Chair, and the summary is there should not be a Draft Standard without a PAR and this is for IEEE coverage regarding insurance and support. (A reference explanation is in Standards Luncheon presentation, also). It was noted there is a PAR to cover the continuous revisions of C57.12.00 and C57.12.90

7. Adjournment

The motion to adjourn by Chair made and hearing no objections; the meeting adjourned around 5:30PM.

Respectfully Submitted

Kipp J. Yule

Standards SC