The Chair, William Bartley opened the meeting calling a show of members to establish quorum which was met.

Bill then requested a review of the Agenda; after a couple of minor changes Dan Sauer moved for approval and Don Cherry seconded then the agenda was approved by unanimous vote.

1. **Meeting Attendance**

The Standards Subcommittee met on Wednesday, October 23, 2013, at 4:30 PM. A role call showed 28 of 50 members in attendance achieving quorum at the meeting. Overall there were 87 attendees, 28 members, 59 guests, including 6 that requested membership upon tabulation of the circulated rosters with 4 meeting the established criteria.

1. **Approval of previous meeting minutes**

The Chair asked if there were any comments or corrections to the previous meeting minutes of the Fall 2012 meeting in Milwaukee, Wisconsin and the Spring 2013 meeting in Munich, Germany. There were no comments to the meeting minutes; Steve Shull moved for approval and Don Platts seconded then the minutes were approved by unanimous vote.

1. **Chair’s Remarks**

Bill summarized the recent activities of the Transformer Standards activity for the six-month period March 15 to September 30, 2013. In the last five months, no new Standards, one Revision and one Corrigenda were approved by Standards Board. In this same period, Standards Board approved two PARs for new standards and one PAR for an amendment. The Transformer Committee is responsible for almost 100 standards, plus over 55 PARs, projects for new standards and revisions. The full Standards Report is available on the Transformers Committee website at the following link:

<http://www.transformerscommittee.org/meetings/F2013-StLouis/Minutes/F13-StandardsStatus.pdf>

The Chair reminded everyone that there are all the due dates for submittal to NESCOM and REVCOM along with past tutorials, presentations and instructions on the process, links to MyBallot with instructions, references and templates for preparing standards that can be found by a link from the Standards subcommittee page of the Transformers Committee website or directly at:

<http://www.transformerscommittee.org/subcommittees/standardsc/StdsDevelopment.htm>

The Chair reminded everyone that a standard has a validity period of ten years from the date of Standards Board approval and an overview for revising standards can be found at:

<http://standards.ieee.org/develop/revisestds.html>

Bill reviewed some items for the TC Adcom

1. WG internal ballots must achieve 2/3 approval before proceeding to a formal ballot
2. A Mandatory Editorial Compliance (MEC) Review and Legal Review is required.

Richard Marek asked what needed to be submitted?

Dan Sauer asked if this will be in the Committee rules?

Sanjab Som asked on the 2/3 approval how was that determined; Gary Hoffman said, it is 2/3 of respondants

1. **Working group reports.**
   1. **Continuous Revision of C57.12.00**

The purpose of this WG is to compile all the work being done in various TF/WG/SC’s for inclusion in the continuous revision of C57.12.00 in a consistent manner. This WG coordinates efforts with the companion Standard C57.12.90 so that they publish together. The goal is to issue new Standards every 2 to 3 years.

Standard C57.12.00 was published September 2010. A new PAR was requested in April 2011 and approved June 16, 2011 to cover the ongoing work for the continuous revisions. This PAR is good through December 31, 2015.

At this point several changes / additions to the standard have been approved by the respective subcommittees and are ready to go into the document. The Dielectric Tests Subcommittee is finishing work on revisions to Tables 4 and 5, which I deem critical to have included in this next revision. There also is still an outstanding issue concerning a possible equation error (pointed out to me at Milwaukee meeting) that I need to investigate. Once these steps are completed, I will solicit input from all subcommittees for any additional changes they may have ready for inclusion in the next ballot.

Subject to the successful outcome of the preceding statements, I expect in early 2014 to form the ballot pool and launch the ballot.

Respectfully submitted, by Steven L. Snyder, WG Chair, on October 23, 2013

* 1. **Continuous Revision of C57.12.90-2006**

This is essentially a working group of one person. There was no meeting held. The purpose of the WG is to keep track of the work being done in various TF / WG / SC for inclusion in the continuous revision of C57.12.90 in a consistent manner.

**Summary**

The new PAR was approved on June 15, 2011. It is valid until Dec 31, 2015.

***Future Revisions***

Changes *already approved* for the next revision:

* New subclause 10.2.5 Connection of neutral terminal during switching impulse tests by Pierre Riffon’s WG Revision to Impulse Test in Dielectric Test Subcommittee. Submitted on 4/27/09.
* Revisions to Clause 12 Short-circuit tests and new Annex on Connections diagrams for testing three-phase transformer using alternate single-phase source by Marcel Fortin’s Task Force in the Performance Characteristics Subcommittee. Submitted in Fall 2009.
* Revision to subclause 10.3.2.4 Tap connections during lightning impulse test by Pierre Riffon’s WG Revision to Impulse Test in Dielectric Test Subcommittee. Submitted on 10/28/10.
* Revisions to subclauses 10.2.1,10.3 and 10.3.3 which increases the number of full wave impulse waves applied from one to three. This is the same as IEC
* Revisions to Clauses 6 & 7 Polarity & Phase-relation and Ratio tests from Mark Perkins’ PCS WG for Revision of C57.12.90. Final survey circulated in Sept 2011.
* Revisions to Temperature-rise tests by Paulette Payne Powell’s WG in the Insulation Life Subcommittee
  + Subclause 11.1 which reversed the order of appearance of the two methods of simulated loading for temperature test. Submitted in January 2013.
  + Subclause 11.2.2 which revised items “a” through “f” of the hot resistance measurement procedure for temperature test. Submitted in January 2013.
  + Subclause 11.1.2.2 Loading back method. Added text and Revised Figures 28 & 29. Submitted in September 2013.

***pending work***

* Revision to Clause 13 Audible Sound by Ramsis Girgis’ TF in the Performance Characteristics Subcommittee.
* Other possible revisions to subclauses 10.2 to 10.4 from Pierre Riffon’s WG for revision of impulse tests.
* Other possible revisions to subclauses 10.5 to 10.10 from Bertrand Poulin’s WG for revision of low frequency tests. Maybe some change due to Class II PD testing on 69 kV, xfmrs >15 MVA.
* Other possible revisions to subclause 9.5 Zero Phase Sequence Impedance from Mark Perkins PCS WG for Revision of C57.12.90.

Respectfully submitted by Stephen Antosz, WG Chair, on October 2013

* 1. **WG on Revision of IEEE PC57.152 (old 62) – Loren Wagenaar**

The Working Group has completed its work and the standard has been published.

* 1. **Task Force for Comparison of IEEE & IEC Standards for Cross Reference**

The task force for IEEE-IEC cross reference did not meet at the St Louis meeting. Since the last time comparison of IEC and IEEE standards were taken up IEC standards 60076-1, 60076-2 and 60076-3 were revised and published.

Ajith Varghese (SPX Transformers) has agreed to compare the test requirements in the IEEE and the IEC standards and Hasse Nordmann (ABB transformers) agreed to compare the temperature rise requirements in the IEEE and IEC standards. Vinay Mehrotra (SPX transformers) will compare the requirements in the IEC 60076-1 standard and the c57.12.00 standard.

The comparisons of these standards will be presented at the next task force meeting.

Respectfully submitted by Vinay Mehrotra on October 23, 2013

* 1. **TASK FORCE on Recommendations to the IEEE Transformer Committee (TC) on Recommended Changes, Deletions, and Insertions Related to Normalizing the References of Insulating Liquids Throughout the IEEE TC Standard Series – P. McShane–TF Chair**

Patrick McShane reported the task force did not meet as too many assignments were outstanding.

1. **Old Business**
   1. None
2. **New Business**
   1. None
3. **Adjournment**

The meeting was adjourned by Chair without objection; the meeting adjourned around 5:10pm.

Respectfully submitted by Jerry R. Murphy, Standards SC Secretary