Working Group D2 Cable Systems (IEEE 525)
Meeting Notes of October 20, 2011 – Nashville, TN

Chair: Debra Longtin
Vice Chair: Steve Shelton
Secretary: Brian Farmer

Meeting called to order by Chair, Deb Longtin at 1:00.

Total attendance: 21. Members: 11 (0f 18 rostered members; quorum present), Corresponding Members: 1, Guests: 9

Barnes, Thomas	Corr. Member	McDonald, Jon	Guest
Cathey, Jody	Guest	Nadeau, Mike	Guest
Farmer, Brian	Secretary	Sharpe, Doug	Guest
Fox, Dale	Member	Shelton, Steven	Vice Chair
Ghai, Raj	Guest	Story, Brian	Guest
Gravelle, Joe	Member	Thompson, Bill	Member
Hobbs, Bob	Guest	Watkins, Diane	Member
Jamir, Dewan	Member	Wengerter, Don	Guest
Krapek, John	Guest	Wong, Alexander	Guest
Longtin, Debra	Chair	Zook, Adam	Member
Mans, Cary	Guest		

1. Patent slides shown. Meeting notes of spring 2011 (Chicago) were reviewed. The Par is available on the working group web page.

2. Schedule:
   We have only 2 annual meetings & 2 fall meetings to finish up the work. Milestones (from prior meeting) are:
   - Drafts submitted Spring 2012
   - WG review Fall 2013
   - Complete draft prior to Spring 2014 meeting
   - Review draft at Spring 2014 meeting
   - Submit final draft to RevCom July 2014.

   Note: All unfinished reviews and additional comments are to be sent to Adam Zook at adam.j.zook@gamil.com by the end of the year.

3. Large Scale Example – Drawing is essentially done. No specific items to address at this point. Steve S. and Randy C. have started write up – identified general part, ready to start calculations. This may be a focus item next May.

4. Review of revisions submitted to date - Adam had compiled all comments received to date. See table below for status of those sections which have been reviewed and edits submitted. Group reviewed the new document with the marked revisions.

Section No. and action items/notes from discussion:

1. **Adam** Z. will check scope and purpose against the Par.

3. **Doug S**. will add definitions for EPR and XLPE (possibly others)

4.3.1.1 Discussed issue about CT circuits. Rather than suggest sizes, should we just recommend multi-conductor cable. Should color coding be mentioned? **Mike N**. to revise/expand

4.3.1.1. **Jody Cathey** will look at discussing parallel CT circuits as part of circuit sizing.

4.3.3 Add short paragraph on jacket? Other components of the cable are described. **Deb & Adam** will review Steve Brown's section 4 rewrite from some years ago.

4.5 **Mike N** to rewrite sentence about battery lead spacing.

5. No items.

6. No items.

7. Should this include battery main cables? Should it refer to AC cables only? Everyone to review the document for context and decide next meeting.

7.1 **Dale** to review new comment and if this can/should be included in Annex B instead. Identify conditions unique for power cables.

8.2.2 **Brian** to review and reword for clarity.

8.11 **Adam** has a paper on testing to review. Needs more discussion. May just refer to new IEEE 400 which is reportedly now comprehensive with all tests.

Annexes:

A. Future discussion. Review if flow is correct when working through the large scale example.

B. None

C. Need another section or Annex for fiber optic cable? Add fiber data in Sect 6 rather than annex? Depends on what text Craig provides.

D. Need **Craig's** input.

E. None

F.3 **Dale** will review why sentence was struck out regarding cable tray stacking.

F.3 **Dale** to review two paragraphs related to transients and see what might be moved to Annex G.

F.4 **Dale** will rework to improve clarity & flow.

Review stopped after Annex F due to lack of time. Continue next meeting.

Deb will contact these folks to follow up on their assignments: Boris S. Annex J; Roland Y. Annexes K, L, M & N; Hanna A. Annex G; and Craig P. Sections 5 & 6 and Annexes B & D.

5. Next meeting in Raleigh, NC, week of May 20.

Brian Farmer, Secretary

Section	Issue	Person to Address	Status, Oct. 2011
4	General review	Mike Nadeau & Steve Brown	Submitted 7/31, 8/1
5 & 6	General review	Craig Preuss & Walt Constantine (Deb to ask)	WC confirmed prior comments 8/3.
7	General review	Dale Fox	Submitted 9/23.
7.6, Annex H	Segregation- control vs power – also check NEC especially if over 600 v. for personnel protection. Arc flash concerns should be addressed, see IEEE 1584. May need to segregate over 240 volt. Refer also to cyber or physical security standards?	Joe Gravelle, Brian Cain	None submitted
8	General review	Brian Farmer	Submitted 8/29
Annex A	General review for discussion next meeting	All	Comment from Brian F only.
Annex B	General review	Dale Fox, Craig Preuss	Submitted by DF 9/23
Annex C	General review, clarify for copper cable only, Table C3 possible error/correction	Doug Sharpe	Submitted 10/19
Annex D	Expand to include fiber optics, isolation devices and GPR. Related standards?	Craig Preuss	None submitted
Annex E	General review	Bill Thompson	Submitted 8/18
Annex F	General review	Dale Fox	Submitted 9/23
Annex G	General review	Hanna Abdallah (contact Shashi Patel for assistance), Gary Engmann to review shielding and electrostatic/electromagnetic coupling.	None submitted
Annex H	General Review	Joe Gravelle, Craig Preuss	None submitted
Annex I	General review	Joe Gravelle	None submitted
Annex J	General review	Boris Shvartsberg	None submitted
Annex J 2.3 & J 4.1	Jamming Ratio, compare against IEEE 576	Dewan Jamir	None submitted
Annex K, L, M & N	General review	Roland Youngberg	None submitted