

Meeting Notes of WG D5 January 15, 2009 - Atlanta, GA

Bob Nowell, Chairman, opened the meeting with introductions. There were 16 (15) members and 10 guests present at this meeting. One guest (Kyle King) requested a change in status to member.

1. **Obligatory Statement** - Bob Nowell presented the latest revision of five page long obligatory document from IEEE, regarding patents in standards and inappropriate topics for working group meetings.
2. **Member presence** – There were a total of 30 members on the WG roster circulated at this meeting. Two names were corrected from “Guest” to “Member” as a result of the Nashville meeting. The original count of 16 members present (a quorum) allowed the WG to officially conduct business.

NOTE: In reviewing the roster since the meeting an error was discovered and there were only 15 members in attendance. Therefore the voting described in 5 below is voided and will be addressed in Kansas City.

3. **Minutes/Agenda** – Bob Nowell asked if there any corrections or additions to the 2008 Nashville meeting notes. None were noted. A motion/vote was carried and the Atlanta 2009 JTCM working group agenda was approved by show of hands.
4. **Noted Guest** – Kim H. Soo, a Program Manager from IEEE Standards Association Technical Program Development attended the whole meeting as an observer.
5. **Letter from Dr. Aage E. Pederson** (received three days prior to the meeting and distributed to the group) – Bob Nowell asked Dr. William A. Chisholm to review Pederson’s letter and summarize the main concepts for the WG. The letter initiated a lengthy discussion among the WG members regarding validity of Erickson and other LP methods. Some WG members wanted to revisit the proposed changes and not adopt technologies that are not mature. Other WG members mentioned that all known methods are based on approximations and that the approximations are needed to design LP systems for practical purposes. This discussion led to motions proposed by James Brian Cain:
 - The first motion (seconded by Steve Greenfield) was to continue the same way as proposed in Nashville meeting in 2008. The motion was carried with nine (eight) members voting yes, six members voting no and one abstaining.
 - The second motion (seconded by Dennis DeCosta) was to include Delera and Rizk models as additional LP concept methods in the standard. The motion was carried with fifteen (fourteen) members voting yes. Curt Stidham was not present for the second vote.

NOTE: See quorum discussion in 2 above.

6. Other Recommendations by Dr. Chisholm

Dr. Chisholm also recommended that the WG review the following standards/documents and consider correlating some of the concepts with the new revision of the IEEE Standard 998.

- Technical paper by Bouqueneau, C, Normalisation Internationale, Proc LM97, Chamonix,

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1997

- A critical view on the lightning protection international standard by Bouqueneau, C Journal of Electrostatics 65 (2007) 395–399
- IEC Standard 62305 Part 1:2006 – Protection Against Lightning – Part 1: General principles
- IEC Standard 62305 Part 2:2006 – Protection Against Lightning – Part 2: Risk management
- IEC Standard 62305 Part 3:2006 – Protection Against Lightning – Part 3: Physical damage to structures and life hazard
- IEC Standard 62305 Part 4:2006 – Protection Against Lightning – Part 4: Electrical and electronic systems within structures
- IEC Technical Report 61400-24: First edition 2002-07 – Wind turbine generator systems – Part 24: Lightning protection
- Draft of Canadian Standard for protection of Wind Turbines based on IEC 61400-24
- IEEE Standard 1410 Draft Guide for Improving the Lightning Performance of Electric Power Overhead Distribution Lines

These documents will be placed on the web page at a later date.

7. First Draft – First working document has been assembled and shared with WG members at the Atlanta meeting. IEEE SA did not have the document in Microsoft Word format. The document was restored/converted from a PDF file to a Microsoft Word file. WG members assigned to review specific sections recommended changes that have been included in the first draft:

- **Charles W. Haahr** – refer to the e-mail and XL spreadsheet from 10/14/2008 with mostly editorial comments. Technical comment Fig. 4.8 is wrong.
- **Boris Shvartsberg** – refer to e-mail from 10/20/08.
- **Gary Engmann, Joe Gravelle, Koushik Chanda, Ken White** – The WG voted in Nashville 2008 meeting that the investigation summary of this task force should be included in the new Annex. The new Annex was added into the draft.
- **Brian K. Stephens** – refer to e-mail from 01/05/2009 - changes to Clause 2; Sub clause 2.3 – Strike Distance; Sub clause 2.5 – Keraunic Level; Sub clause 2.6 – Ground Flash Density; Sub clause 2.7 – Lightning Detection Networks
- **Dr. Franco D'Alessandro** - The WG voted in Nashville 2008 meeting that the changes to section 5 and 6.2 proposed by Dr. D'Alessandro should be included in the new revision of the standard. The changes were incorporated.

NOTE: Documents (including the latest draft of 998) will be available for retrieval in a password protected area on the Substations Committee new web page. Go to <http://ewh.ieee.org/cmte/substations/>. Select **SCD0**, then select **WGD5**, then select **Protected Files**. The password at this time is “bob”.

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8. **James Brian Cain** – provided an update on his work regarding section 5, followed up with a discussion about striking distance and flash density.

9. **Assignments**

SECTION NUMBER	LEAD PERSON
2	Brian K. Stephens
3-4	Chuck Haahr
5	James Brian Cain
6	TBD
Annex B	Chuck Haahr
Annex C	Hanna Abdallah
Annex D (probability calculations)	Chuck Haahr/ Hassein Bashirian / Randy Clelland
Annex X	TBD

The date and time of the next working group meeting at the May Substations Committee Annual Meeting in Kansas City will be specified later. Please submit **all assignments three weeks prior to the next meeting to the secretary at mhavelka@ieee.org**.

Respectfully submitted by
Martin Havelka
Secretary, WG D5

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Attendance

NAME	ROLE	P*	CONTACT INFORMATION
Abdallah, Hanna	member	-	David Evans and Associates, Phoenix, AZ, hea@deainc.com
Aldridge, Ken	guest		R. W. Beck, Goodlettsville, TN, kaldridge@rwbeck.com
Andries, Scott	guest		ABB, Raleigh, NC, scott.andries@us.abb.com
Arnot, Stan	member	X	SJA Engineering, Toronto, ON, Canada, santro@sympatico.ca
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Barnes, Thomas M.	member	-	Allen & Hoshall, Inc. Nashville, TN, tbarnes@allenhoshall.com
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Bernardas Louis	guest	X	Entergy Services, Inc., lbernard@entergy.com
Berzescu, Romulus	member	-	Sargent & Lundy LLC, Chicago, IL, romulus.berzescu@sergentlundy.com
Beske, Bryan	member	X	American Transmission Company, Madison, WI, bbeske@atcllc.com
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D'Alessandro, Franco	c.member	-	PhysElec Solutions Pty LTD, Australia, info@physelec.com
DeCosta, Dennis	member	X	Commonwealth Associates Inc., Jackson, MI, dfdecosta@cai-engr.com
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Mousa, Abdul	c.member	-	Retired from BC Hydro, BC, Canada, abdul_mousa@hotmail.com
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Rison William	c.member	-	New Mexico Tech., Socorro, NM, rison@ee.nmt.edu
Rogers Donald R.	member	-	Bechtel, Frederic, MD, drrogers@bechtel.com
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Stephens, Brian	member	-	Ameren, Decatur, IL, bstephens@ameren.com
Stidham, Curt	member	X	Harger Lightning & Grounding, Grayslake IL, cstidham@harger.com
Story, Brian	member	X	Entergy, Kenner, LA, bstory@entergy.com
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