

Meeting Notes October 6, 2014 Nashville TN

IEEE Substation Committee Working Group D5 Guide 998

- Brian Cain reviewed agenda
- Performed introductions including affiliations
- Reviewed Patent slides
- Meeting notes from Portland were not reviewed
- No quorum was needed, see sign in sheet
- Had discussion on whether to perform a tutorial in Minneapolis
 - 4 or 8 hours tutorial
 - Discussion centered on splitting into two sessions, one Sunday and try to do one during week in evening like 5:30-9:30
 - Brian will coordinate preparation of tutorial. Tentative Presenters will be Brian Cain, Brian Beske, Hamid Sharifnia, and one TBD? Martin Havelka may be available as a backup.
- Discussion held on whether we should prepare an application guide to be a supporting document. We will continue to review. Don and Brian clarified we have no PAR, we are presently a task group reviewing and gathering ideas for a tutorial, application guide, of guide modifications and revisions.
- The WG discussed the possibility of using #-D models in the tutorial or the application for visual clarity.
- Brian reviewed the PAR examples from Erin Spiewak from IEEE 487 and 487.1. WGD5 might create an application guide as a 998.1 document.
- Brian Cain reviewed some of the questions received from various users since publications. They will be addressed in future revisions or in the application guide
- Need to provide more info for the development of Z_s and I_s , and possibly expanding Annex C
- Tom Proios volunteered to provide a list of common questions he receives from younger engineers. Will use for possible revision or in the application guide or in the tutorial
- Application guide may include use of various methods such as fixed angle or Rolling Sphere (EGM)
- There is an editorial update required for page 18 lines 5-9.
- Need to explain why we use minimum stroke current of 2 kA or 3kA. Take it from references and provide more info.
- Had discussion on what to do to provide direct stroke protection when there is GIS gear of HVDC in the sub. May need to provide exceptions if equipment is in buildings. Will need to coordinate with other working groups. Brian Cain will contact Markus Etter or Herman Koch. Open air GIS/GIL may need to be addressed.
- May need to update discussion in annex on Risk analysis. Don Wengerter will talk with Bill Carmann. Don spoke with Bill on 10/07/14. Bill will get it out and Don will distill and gets it out to the group. Need to address material risk, cost of outage, loss of production (customer owned

facility), etc. similar to component cost examples discussed in IEEE 1264. What components effect risk and at what cost?

- Dale, Ben, Bryan Beske, and Hamid will review Annex(es) to determine if user friendly. Need to look at them as if new engineer was using.