



IEEE PES DSASC Test Feeder Working Group

Minutes

Meeting on March 22nd, 2011
2011 PES Power Systems Conference and Exposition, Phoenix, AZ

An informal meeting of the Test Feeder Working Group was held at the end of the March 22nd DSASC Panel Session at the 2011 IEEE PES PSCE. Nine participants were in attendance:

Attendee	Affiliation
Wayne Carr	Milsoft
Binh Dam	GE
Kendall Demaree	Alstom
Roger Dugan	Electric Power Research Institute
Jason Fuller	Pacific Northwest National Laboratory
Bill Kersting	Milsoft / WH Power Consultants
Tom McDermott	MelTran
Kevin Schneider	Pacific Northwest National Laboratory
Greg Shirek	Milsoft

Action Items

1. Tom to convert and post DG protection test case and solutions to working group website.
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2. Kevin to follow up with Frank Dougherty to verify permission to use secondary network models.
 - a. If permission is obtained, Tom and Kevin to begin working on creating the common secondary network model already available in OpenDSS.
3. ALL to begin working on Short Circuit Benchmark, by solving short circuit currents for the current radial test feeders. Comparison of answers to occur before the end of summer.
4. ALL to find someone (graduate student?) to validate Bill's comprehensive test feeder.

Contact Information

Working Group Chair: Roger Dugan (rdugan@epri.com)

Working Group Secretary: Jason Fuller (jason.fuller@pnl.gov)

Working Group Website: <http://ewh.ieee.org/soc/pes/dsacom/testfeeders/index.html>

Test Feeder Working Group Meeting Minutes

1. Bill's comprehensive test case has been posted on the working group website, but not tested.
2. Distributed generation protection test case was presented by Tom, and is ready to be posted on the website and tested. It will be translated to something more generic, as it is only in OpenDSS format right now.
3. Frank Dougherty of Consolidated Edison contacted Kevin about creating a secondary network test system to test vendor solutions.
 - a. Tom currently has 2 of their models already in OpenDSS. Suggested using their smallest one of ~2000 buses and multiple feeders.
 - b. Bill questioned the need for a HUGE network system.
 - c. Tom stated that a few loops are okay for compensation style radial algorithms, but tend to break down with multiple loops, so system needs to be large enough to test that. Consider reduce ordering, or taking a small subsection of the network suggested in (a).



- d. (a) has some parallel lines which have been reduced and doesn't have unbalanced load data. Would have to be created.
 - e. Kevin will verify permission to use model with Frank before proceeding with sanitizing of the model and cross-checking between solvers.
4. Roger led discussion of where the working group stands on the road map presented in Seattle 2009.
- a. Neutral-Earth-Voltage test cases: Two now exist, and have been validated and posted on the working group website.
 - b. Short Circuit Benchmarks: Only DG case exists now. Forward motion is to post short circuit currents for every object in current test feeders (4-, 13-, 123-, etc.) with no loads, since this is standard for planning. Everyone will try to compare answers before end of summer.
 - c. Large Distribution System: 8500 node system is completed, validated, and posted.
 - d. Comprehensive Test Feeder: Posted but not tested.
 - e. Regulator Impedances: Randy Horton was able to somewhat answer. Essentially some have very small impedances, some have very large. If they are included in a model, then it needs to be stated explicitly.
 - f. Inverter Based DG Models: EPRI has some in power flow, but not in the harmonic models. Still questions on what are the fault contributions.