2017 IEEE PESGM TF on Interfacing Techniques for Simulation Tools - Meeting Minutes

Location: IEEE PES GM 2017, Chicago, IL
Date: 07/17/2017
Chaired by Xiaoyu Wang (Carleton University)

Attendee:
Please refer to the attendance link on the TF website: http://sites.ieee.org/pes-itst/officers/attendance/

Agenda
  1. Two presentations were given:
     b. Qiuhua Huang (PNNL), and Liwei Wang (UBC), “EMT-TS Hybrid Simulation Benchmark Models”
  2. Business for the Task Force
     a. Announcement of TF website
     b. Comments on IET Special Issue
     c. TF paper status
     d. 2017 PES GM panel session
     e. 2018 PES GM tutorial and panel session planning
     f. New TF paper/proposal

Discussion Highlights
  1- Yusheng Luo gave a speech on the co-simulation for hydropower systems; Qiuhua Huang presented
  the intended benchmark studies for hybrid simulation, and Liwei Wang presented the 39-bus MMC system studies.
  • Venkata Dinavahi (Univ. Alberta) asked questions on the use of FDNE models for hybrid
  simulation to improve the interfacing accuracy, especially for the MMC benchmark system model.
  • Udaya Annakkage/Shahin Filizadeh (Univ. Manitoba) would like to contribute an IEEE 118-bus system (embedded with a wind farm) for the hybrid simulation test case.
  • Yi Zhang
  • Kai Strunz (TU Berlin) suggested adding a benchmark system for AC system connecting to a
  multi-terminal DC grid, such as the CIGRE B4 DC grid model.
  • Shrirang Abhyankar (ANL) asked questions on specific variable/phenomena to verify the
  EMT-TS test cases
  • Yi Zhang (RTDS) asked questions on the data format for data exchange between EMT and TS
  simulations. He will also make contribution on the EMT-TS hybrid simulation benchmark models.

  2- Business for the Task Force
  • TF website announcement
    o Website: http://sites.ieee.org/pes-itst
    o Update: included the published TF papers and previous presentations, more
      suggestions are welcome.
  • IET GTD Special Issue on Interfacing Techniques for Simulation Tools in Smart Grid
Guest editors from this TF: Xiaoyu Wang, Venkata Dinavahi, Antonello Monti, Shrirang G. Abhyankar, Yi Zhang, Peter Palensky, Jun Wen, Omar Faruque

22 full papers were accepted and the special issue will be online in Aug. 2017.

- **TF paper status**
  - Paper 2: Interfacing Applications for Uncertainty Reduction in Smart Grids Utilizing Distributed Intelligences, published online, Renewable & Sustainable Energy Reviews.
  - Suggestion: revise the following previously developed papers to TF reports and post them on the TF website. Paper 3: Interfacing 3D finite element analysis tools with electromagnetic transient programs Paper 4: Co-simulation interfaces in device-level circuit simulators.

- **2017 GM panel session sponsored by Transient Analysis and Simulation Subcommittee**
  - Title: “Challenges and solutions of interfacing techniques for EMT/TSA hybrid simulation - Industry perspectives”
  - Panelists: Xi Lin (Powertech), Garth Irwin (Electranix), Ying Chen (Tsinghua University), Jean Belanger (Opal-RT), and Yi Zhang (RTDS).

- **Panel session and tutorial for 2018 PES GM**
  - Deadlines for the submittal: 2017 Aug. 7 (Panel Session), and Aug.22 (Tutorial).
  - Peter Palensky (TU Delft) proposed to present a panel on research infrastructure (i.e., labs) coupling.
  - Planning for the tutorial on EMT-TS simulations (about 4 hours).

- **New TF paper/proposal**
  - Peter Palensky will lead a new TF paper on coupling of smart grid research infrastructure, models, and laboratories for distributed real-time assessment of cyberphysical energy systems.
  - New proposals are welcome.

- **2018 TF meeting**
  - The 2018 IEEE PES General Meeting will take place from Sunday, August 5 - Friday, August 10, 2018 in Portland, Oregon, USA.