

Minutes of Intelligent Systems Subcommittee Meeting
IEEE-PES GM Montreal
Monday, June 19, 2006, 2 pm to 4 pm, Room 514a

Chair: Dagmar Niebur, Drexel University
Vice-chair: Stephen McArthur, University of Strathclyde
Technical Secretary: Ganesh Kumar Venayagamoorthy, University of Missouri-Rolla

Meeting started at 2.05 pm.

An attendance list was taken with people writing their names and contact information.

The chair welcomed everyone to the IS subcommittee meeting and asked everyone in the room to introduce themselves.

1. Approval of minutes of IS subcommittee meeting at IEEE PES GM 2005

The minutes of IEEE PES GM 2005, San Francisco was reviewed for corrections and the minutes were approved unanimously.

2. Announcements

The three task forces of the IS subcommittee met between 11.00 am and 2.00 pm on Monday, June 19, 2006.

There are five panel sessions in this meeting namely –

- i). Tuesday, June 20, 2006 9:00 AM-12:00 PM, Concepts and Approaches in Multi-Agent Systems for Power Engineering Applications, organized by Stephen McArthur, Room 511e
- ii). Tuesday, June 20, 2006 2:00 PM-5:00 PM, Intelligent Techniques for Power System Generation Control, organized by Ganesh Kumar Venayagamoorthy, Kwang Y. Lee, Room 512f
- iii). Wednesday, June 21, 2006 9:00 AM-12:00 PM, Artificial Intelligence Techniques for Dynamic Security Assessment, organized by Nikos Hatziargyriou, Room 510c
- iv). Wednesday, June 21, 2006 9:00 AM-12:00 PM, Intelligent Data Mining and Analysis Applications to Solving Power System Problems, organized by Surya Santoso, Room 510a
- v). Wednesday, June 21, 2006 2:00 PM-5:00 PM, Utility Applications of Intelligent Systems, organized by Lawrence E. Jones, Room 512d.

There are 3 paper sessions at this meeting:

- i). Thursday, June 22, 2006 9:00 AM-12:00 PM, Heuristic Optimization Techniques for Power Systems, Room 512g
- ii). Thursday, June 22, 2006 2:00 PM-5:00 PM, Load and Price Forecasting, Room 510g
- iii). Thursday, June 22, 2006 2:00 PM-5:00 PM, Multi-agent Systems for Power Systems, Room 510d

There are three panel sessions at the PSC&E 2006 Atlanta meeting namely –

- i). Applications of Intelligent Data Mining and Analysis in Solving Power Systems Problems, organized by Surya Santoso

- ii). Symbolic Computation for Power Systems (repeat from GM 05), organized by Dagmar Niebur
- iii). Intelligent Optimization Techniques for Economic Operation of Power Systems, organized by Tasos Bakirtzis

3. Task Force Activities

3.1 Task Force on Multi-Agent Systems: Steve McArthur

About 30 people in attendance at the TF meeting. A draft white paper on “Multi-Agent Systems for Power Engineering Applications: Concepts, Approaches and Technical Challenges” prepared for submission to IEEE Trans. on Power Systems was circulated at the meeting.

The panel sessions organized by the TF have papers to go along. A panel focusing on the practical applications of multi-agents for power systems is planned for 2007 GM. These papers will be turned into formal publications. There is a plan to hold a tutorial on “Multi-agent systems and application to Power systems” in 2008/2009. Possible tutorial topic for 2008 will be on “Multi-agent software demonstration”.

Prof. M A El-Sharkawi suggested that the TF should look into multi-agent applications for solving optimization problems.

Resources on multi-agents for power systems will be made available on a web-site.

3.2 Task Force on Intelligent Data Mining and Analysis: Surya Santoso

The task force meeting had 11 people in attendance. The TF is planning on organizing a panel for 2007 GM focused on the practical applications of intelligent data mining for power systems. The panelists will be selected by July/August. A draft white paper is in preparation and is intended for circulation at the PSC&E 2006 meeting in Atlanta.

3.3 Task Force on Intelligent Control Systems (ICS): Ganesh Kumar Venayagamoorthy

The TF on ICS had 30 people in attendance and participation at its meeting. There are several other people that have expressed interest in the activities of the TF but could not be attend the meeting in Montreal. The objective of the TF is to organize at least three panel sessions over the next 3 years (2006 to 2008) on applications of intelligent techniques to power system generation, transmission and distribution control. The first of the three panels focusing on “Intelligent Techniques for Power System Generation Control” is held at this meeting (GM06). The GM 2007 in Tampa will have the second panel session on “Intelligent Techniques for Power System Transmission Control”.

The panel session papers will eventually be published as transactions papers and standards. Tutorials are planned for 2008 and 2009 GMs. Edited books for each of panel and additional papers are planned over the next three years.

The scope of the ICSTF is already posted on the web and can be found at http://www.ece.umn.edu/RTPIS/ICSTF/IEEE_PES_ICSTF.html.

3.4 Task Force Promotion to Working Group

A proposal was made to promote all three task forces to working group status. The proposal was accepted and the request will be submitted at the PSACE AdCom meeting on 06/20/06.

4. Other Technical Activities

- Nikos Hatziargyriou mentioned that three panels on Dynamic Security Assessment have already taken place.

- A proposition by Prof. Johan Driesen to have a panel session(s) for GM 2007 on Signal Processing for WAMs, State Estimation, Economic Analysis and Forecasting was put forward. A task force will be formed and name will be decided at a later time.
- Prof. Kwang Lee proposed having a panel session on “Power Network Security/Cybersecurity” in coordination with Prof. Tom Overbye.

5. Panel and Paper sessions for GM 2007 and T&D 2007

Definite panels for GM 2007 include:

- Practical Application of Intelligent Data Mining in Power Systems - Chair: Surya Santoso
- Intelligent Techniques for Power System Generation Transmission - Chair: Ganesh Kumar Venayagamoorthy
- Practical Applications of Multi-Agent Systems for Power Engineering Applications - Chair: Stephen McArthur.

The panels held at GMs can be repeated at T&D or PSC&E. T&D 2007 is moved to Spring 2008.

6. Tutorials

The three task force chairs expressed intention to hold tutorials at the 2008 and 2009 GMs.

7. Upcoming Conferences

- 7.1 IEEE PES PSCE, 29 Oct. – 01 Nov. 2006, Atlanta, GA, USA.
- 7.2. IEEE PES General Meeting 2007, 24 – 28 June, 2007, Tampa, FL, USA
- 7.3 IEEE PES General Meeting 2008, July 20-24, 2008
- 7.4 IEEE PES General Meeting 2009, July 26-30, 2009, Calgary, Canada.
- 7.5 NAPS 2006, September 17 – 19, 2006, Southern Illinois University Carbondale.
- 7.6 ISAP 2007, Nov. 4-8, 2007, Kaohsiung, Taiwan.
- 7.7 PowerTech 2007, Lausanne, Switzerland, July 1-5, 2007.
- 7.8 IEEE CIS Series of Symposia, April 1-5, 2007, Honolulu, HI. Announcement for tutorial and special session proposals was made.
- 7.9 Prof. Venayagamoorthy announced that a special session on the “Applications of Computational Intelligence in Power Systems” with 18 papers is held at the IEEE WCCI 2006 in Vancouver, Canada in July 2006.
- 7.10 A proposal to have a joint meeting of ISAP and PSCC is in progress for 2012 and potential location is Athens, Greece. This joint meeting will bring industry to the knowledge of ISAP activities.

8. Other Business

The subcommittee chair announced that the ISAP 2005 proceedings are available on either CD or through IEEE Explore and anyone interested in receiving a copy can contact her.

The chair asked if anyone present at the meeting will be attending the PSC&E 2006 to see if a meeting of IS subcommittee could be held. It was decided based on the response not to have a formal meeting.

9. Next Meeting

The next formal subcommittee meeting will at the PES GM 2007 in Tampa.

The meeting was adjourned at 3.25 pm. Motion to adjourn put forward by Professor M A El-Sharkawi and seconded by Mr. Ekrem Gursay.

Respectfully submitted,

Ganesh Kumar Venayagamoorthy