

Cyber-Physical Systems Distributed Control: The Advanced Power Grid

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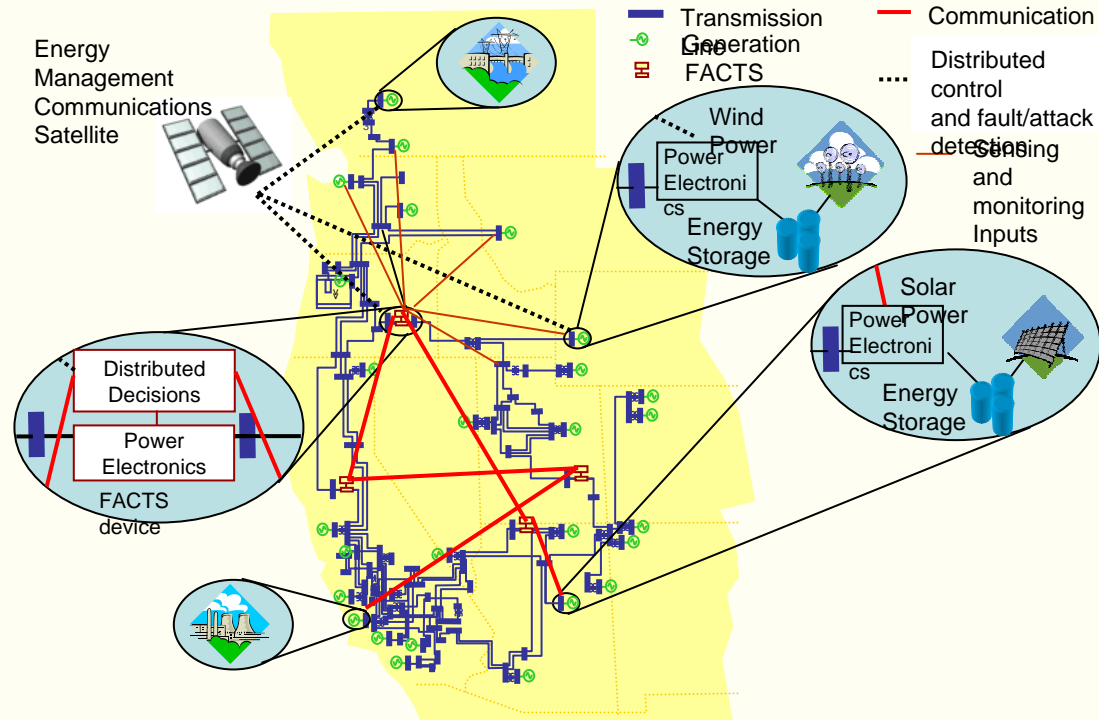
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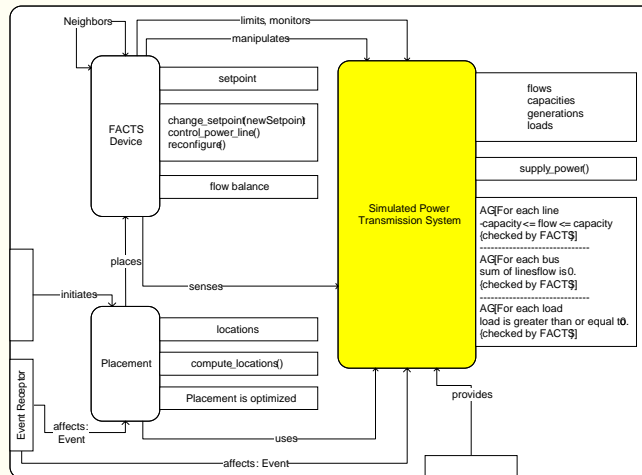
Advanced Electric Power Grid



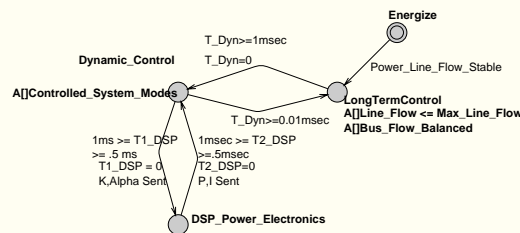
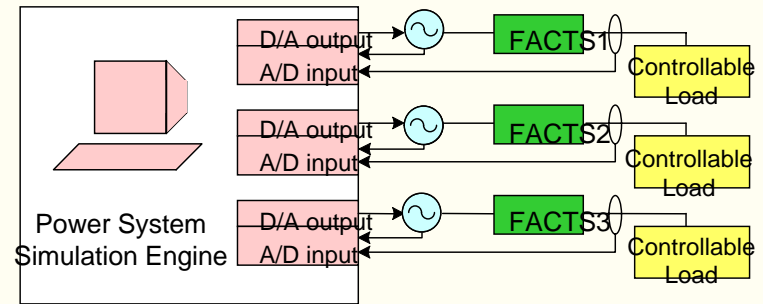
- Large, complex, interconnected, real-time, critical networks
- Move away from Centralized Manual Controls
- Need integrated, decentralized, robust, survivable control

Modeling and Semantic Integration

What Cyber Says



What Physical Wants



What we all need

Hardware/software definitions of correctness (not separate) for Co-design and to describe Complex Interactions of Components

Fault Tolerance & Security

- **EM enforceable correctness on Hardware/Software**
 - Physically Feasible
 - Multiple Time scales
- **Define & Enforce Socio-Economic**
 - Hospital vs. Walmart
- **Security – Physical exposes actions**
 - Pentagon-Pizza



Systemic Change

- **Multidisciplinary Research & Education – Different Thought Processes – *Power Informatics, Materials Informatics, Transportation Informatics***
 - Train/retrain next generation
 - Understand real-time, modeling, security, economics, and ethics
 - Professional responsibility

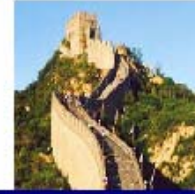
Call for Contributions

The 31st Annual International

Computer Software and Applications Conference

COMPSAC 2007

Beijing, China, July 24 - 27, 2007



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*Signature Conference on
Software Technology &
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COMPSAC is a major international forum for researchers, practitioners, managers, and policy makers interested in computer software and applications. It was first held in Chicago in 1977, and since then it has been one of the major forums for academia, industry, and government to discuss the state of art, new advances, and future trends in software technologies and practices. The technical program includes keynote addresses, research papers, industrial case studies, panel discussions and fast abstracts. It also includes a number of workshops on emerging important topics.

The creation of trustworthy and dependable software spans all aspects of software engineering. COMPSAC is a unique forum to bring together these facets and their major stakeholders. Building on the trustworthy, sec technical theme for the 31st conference is SOFTWARE ENG

The program of COMPSAC 2007 will continue to feature research infrastructure systems such as, but not limited to, civil, telecom mechanisms that support the design, modelling, and evaluation of and co-design, modelling, design, development, testing, measure construction of these systems is not limited solely to the field of development software prototype, industry-university collaboration accepted papers will be published in the conference proceedings in

Authors are invited to submit original, unpublished research or workshop proposals, tutorial proposals, and review process can be will be limited to 8 and 4 (IEEE Proceedings style) pages, respect Guidelines to prepare your papers. At least one author of each award and 1-3 Best Student Paper Awards will be presented by CC

IMPORTANT DATES

- ◆ November 1, 2006: Workshop Proposals due
- ◆ January 15, 2007: Abstract due
- ◆ January 31, 2007: Full Paper and Short Paper due
- ◆ March 15, 2007: Decision Notification (electronic)
- ◆ April 15, 2007: Camera-Ready copy and Pre-registration due

SUBMISSION

Upload regular papers and fast abstracts in PDF, Postscript or RT

Submit workshop and panel proposals in plain text via e-mail to Program co-Chair: Bruce McMillin at fm@umr.edu

Information on accepted workshops and the submissions of workshop papers will be available at the conference website <http://www.compsac.org/>

GENERAL INQUIRIES

For more detailed and updated information, please refer to: <http://www.compsac.org/>

For further information, please contact: Carl Chang, Chair, Standing Committee, at chang@astate.edu

OTHER PROGRAM DEVELOPMENT INQUIRIES

Please contact:

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on the trustworthy, secure, and dependable software themes of highly successful recent COMPSAC conferences, the technical theme for the 31st conference is **SOFTWARE ENGINEERING -- CRITICAL FEATURES and INFRASTRUCTURES**