NIST Smart Grid and Cyber-Physical Systems Newsletter

November 2015

- Deadline for Public Comment on Draft Cyber-Physical Systems Framework is November 2, 2015
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- NIST Transactive Energy Challenge is Underway; Interim Workshop Planned for December 3-4, 2015
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Deadline for Public Comment on Draft Cyber-Physical Systems Framework is November 2, 2015

The Cyber-Physical Systems (CPS) Framework document developed by the NIST Cyber-Physical Systems Public Working Group (CPS PWG) was released as a draft for public comment on September 18, 2015. It is intended to provide a methodology for understanding, designing, and building CPS, including those with applications in multiple 'smart' domains.

The 45-day period for public comment on the draft document ends on Monday, November 2, 2015. The draft document and a spreadsheet template for submitting comments are available online, and comments may be submitted via email to DraftCPSFrameworkComments@cpspwg.org. An additional Technical Annex, "Timing Framework for Cyber-Physical Systems," is also available for download.

Developed in partnership with industry, academic, and government experts, the CPS PWG's draft document reflects more than a year's effort. Archives of the group's workshops and webinars are available online at the CPS PWG website. The most recent webinar, held last week on October 23, featured a presentation providing an overview of the Draft CPS Framework Document.

The work of the CPS PWG, which is open to all, will continue in the coming months. According to NIST's Dr. David Wollman, who co-chairs the group, the framework is likely to undergo a second draft release for further public comment before a final version is published.

The CPS PWG is composed of five working subgroups:

- Vocabulary and Reference Architecture
- Use Cases
- Timing and Synchronization
- Cybersecurity and Privacy
- Data Interoperability

To learn more about the CPS PWG or to join one of the subgroups, please visit the "Contact Us" page on the website.

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Global City Teams Challenge 2016 Kickoff Workshop to be Held on November 12-13, 2015

Municipal leaders, technological innovators, and government leaders from across the globe will gather at the NIST Campus in Gaithersburg, Maryland, on November 12-13 for the Global City Teams Challenge 2016 (GCTC 2016) Kickoff Workshop. GCTC 2016 will bring communities and innovators together to encourage collaboration on a range of issues from energy management to disaster response to mass transit improvement.

GCTC 2016 will build on the success of GCTC's first round, which began in September 2014 and created 64 teams of more than 50 cities and 230 organizations. The goal is to help communities and businesses connect to improve resource management and quality of life by using effective networking of computer systems and physical devices, often called the Internet of Things (IoT) or cyber-physical systems (CPS).

Similar to last year's kickoff, a primary objective of the upcoming workshop is to facilitate team-building and initiate the development of Action Clusters. Attendance at the workshop will help participants find the right partners to solve their specific problems and create smart cities that take advantage of what IoT has to offer.

The workshop is open to all, and there is no registration fee. However, NIST is a controlled-access facility, and to gain access to the grounds, you must pre-register by November 5 (see online registration form).

The workshop will feature:

- Presentations by federal government leaders from the White House and other participating federal agencies
- Presentations by representatives from the central governments of Kenya, the Netherlands, and South Korea
- Discussions with municipal leaders from across the United States
- Working sessions with GCTC technology partners (including IBM, ATT, FIWARE, and many others) to introduce IoT/Smart City tools and platforms

Please see the preliminary agenda for more details.

For those unable to participate in the Kickoff Workshop in Gaithersburg on November 12-13, please consider joining one of approximately 25 local GCTC kickoff events that IBM is convening in cities across the globe. The local kickoff events will be held in late November and early December, 2015. For more information about these GCTC local events, please visit www.ibm.biz/gctcinfo.

For additional information on the Global City Teams Challenge and its many participants, please visit the program's websites at http://nist.gov/cps/sagc.cfm and at https://www.us-ignite.org/globalcityteams/.

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NIST Transactive Energy Challenge is Underway; Interim Workshop Planned for December 3-4, 2015

At a Kickoff Workshop on September 10-11, 2015, NIST launched the NIST Transactive Energy Modeling and Simulation Challenge for the Smart Grid (TE Challenge). Forty transactive energy (TE) experts from industry, academia, and government met in Gaithersburg, Maryland, with a common goal of creating and demonstrating modeling and simulation platforms while applying TE approaches to real grid problems.

The workshop opened with a half day of presentations on the status and direction of TE and the vision, goals, and format of the Challenge. (These presentations, along with other useful resource materials, are archived online in the TE Challenge library.) The rest of the workshop was devoted to interactive sessions where participants assembled into teams that reflected shared interests.

By the time the workshop concluded, five teams had been formed and had begun planning their projects in the following areas:

- Reference Grid and Scenarios
- Co-simulation Platform
- Business and Regulatory Models for TE
- Abstract Interactions for TE
- Microgrids—Implementing TE

In the coming weeks and months, the teams will further develop their projects, with the goals of advancing TE, building a professional community, and driving collaboration and understanding. As interest in the Challenge continues to grow, new participants will be joining existing teams and new teams in other areas will be forming.

For those interested in TE in general—and the TE Challenge in particular—two good ways to learn more about these projects and become engaged in their efforts are the following:

1. Visit the TE Challenge Collaboration Site to see which organizations are involved in which teams (with team work plans), and join the Challenge.
2. Attend the TE Challenge Interim workshop, to be held December 3-4, 2015, at NIST's facilities in Gaithersburg, Maryland. The purpose of the interim workshop is to focus the vision, build up existing teams, and form new teams. Draft agenda and registration information are available here.

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Smart Grid Interoperability Panel (SGIP) Update

The SGIP Annual Conference, November 3-5, 2015, in New Orleans, Louisiana, will feature a theme of "Advancing through Collaboration." The speaker program will feature utility, vendor, and industry senior executives. NIST's Chris Greer will speak at a panel session titled "Smart Grid and IoT Unite," (Wed., Nov. 4, 10:00 a.m.), and NIST's David Wollman will moderate a panel on

"Management of the Grid," (Wed., Nov. 4, 9:00 a.m.). Registration information and the conference agenda are available online at the SGIP Annual Conference page.

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