

PCSF 2005 Fall Meeting Chicago, IL

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PCSF Technical Manager**



**PROCESS CONTROL
SYSTEMS FORUM**

Collaborating to Advance Control System Security

Agenda

- ◆ **PCSF Intro**
- ◆ **Status Report**
- ◆ **Today's schedule**
- ◆ **Interest Group news and notes**
- ◆ **Congress of Chairs - International Standards Coordination Meeting**
- ◆ **Elections**
- ◆ **Web site improvements**
- ◆ **2006 Spring meeting announcement**
- ◆ **SCADA Security Summit**
- ◆ **SAFETY Act**

PCSF Intro

- ◆ **Department of Homeland Security, S&T, HSARPA**
- ◆ **Mitretek Systems chosen to Manage and Operate**
- ◆ **Mission - To accelerate the design, development, and deployment of more secure control and legacy systems**
- ◆ **Work products come from Interest and Working Groups**
- ◆ **PCSF Congress of Chairs IG - International Standards Coordination Meeting (ISCM)**

PCSF Objectives

- **Aggregate information about current organizations**, their efforts, directions, and work product from across multiple sectors to increase visibility and reduce redundancy.
- **Identify consensus cross-industry and cross-functional issues** that require resolution, and determine a path and effort that is owned, traceable, and produces generally acceptable solutions.
- **Cross-connect decision-makers from industry, government, vendors, and academia**, in ways that promote increased understanding of requirements and opportunities for collaboration.
- **Impact a broad portion of the control system community through procedures, methods, guidelines, best practices, and other resources**, issued through organizations that participate in the PCSF.

Status – Past Year

- **PCSF Formational Meeting**

- **PCSF Meetings**

- Spring Meeting – May 17-18, 2005
- Congress of Chairs, International Standards Coordination Meeting – Aug. 25-26, 2005

- **Events Attended**

- International Symposium for Industrial Cyber Security, Vancouver, BC
- Working Together: Homeland Security Conference, Boston, MA.
- DOE Technology Roadmap to Secure Control Systems in the Energy Sector, Baltimore, MD
- KEMA's 5th Annual Conference, Cyber Security of SCADA and Process Control Systems, Albuquerque, NM
- IEEE/PSRC and CIGRE Meetings, Calgary, BC

Status – Past Year

◆ Speaking Opportunities

- InfraGard 2005 Conference in Washington, DC
- United Telecom Council (UTC) SCADA Security Conference, Albuquerque, NM
- American National Standards Institute (ANSI) Homeland Security Standards Panel (HSSP), Bethesda, MD

◆ Congressional Hearing

- “SCADA and the Terrorist Threat: Protecting the Nation’s Critical Control Systems”

◆ Continuous Outreach

- Seek more opportunities to provide support to the asset owners and academia
- PCSF participants as ambassadors

What to expect this year?

- **SCADA Security Summit**
- **Spring 2006 San Diego**
 - British Columbia Institute of Technology (BCIT)
 - PCSRF
 - I3P
- **American Automatic Control Council 2006 Annual Meeting**
- **Interest\Working Group Meetings**
- **Expanded Web site capabilities**
- **International Collaboration**
- **Fall Meeting**

IMPORTANT POINT

Awareness and recognition as a premier collaborative venue is established ... providing quality output is our next challenge

What have we learned?

- ◆ **Standards Coordination**
- ◆ **Education and Training**
- ◆ **Cyber-Security Threats**
- ◆ **Risk Assessments**
- ◆ **Defining and Planning Infrastructure Changes**

Today's Events

- ◆ **SAFETY Act update**
- ◆ **Interest Group meetings**
- ◆ **Key activities in specific sectors that have a broad range of impact (C. Sands, D. Teumim)**
- ◆ **Technology and strategy**
 - Wireless
 - Business Case
 - Virtual Control Systems Environment
 - Key Management
 - Anomaly Detection

Mr. Peter Miller
Director, Mission Support Office
HSARPA, Science and Technology,
Department of Homeland Security



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Interest Groups and Working Groups

◆ Interest Groups (IG)

- Formed out of topic of interest consensus
- Proposed as a result of a presentation or on the Web site
- Identify Chair and Admin (optional)
- Create a charter, including milestones and a plan of action

◆ Working Groups (WG)

- Open, continuous, collaboration among participants
- Address specific problems
- Produce one or more deliverables

Interest Group news and notes

- Congress of Chairs

Standards committee chairs coordinate to avoid duplicative or conflicting standards.

Chair - Dr. William Rush

- Control System Security Event Monitoring

Detecting cyber attacks on DCS and SCADA systems that run the critical infrastructure.

Chair – Mr. Dale Peterson

- Controls Systems Research

Addresses both basic and applied research across the full spectrum of control systems security, including reliability, safety, vulnerability and inter-dependency assessments, intrusion detection, fail-safe and recovery mechanisms, and digital forensics.

Chair - Dr. Ann Miller

Interest Group news and notes

- Crisis management – how to respond to industry events

Focuses on recognition and response to cyber attack, rapid information-sharing during emergencies, establishing needs for emergency management; and real-time situational awareness.

Chair – Mr. Lou Leffler

- Education and Training

Gather, develop, and publicize education & training materials and curricula related to control systems security.

Chair – Dr. John Saunders

- Safe Zone for Critical Information Sharing

Create a safe zone for sharing critical information.

Chair – Ms. Rita Wells

Interest Group news and notes

- Self Assessment Development, Process, Standards, and Tools

Address and develop guidelines, methods, and tools for SCADA vulnerability assessment including the means and metrics to measure and compare cyber operational readiness both within and across systems as threats change.

Chair - Mr. Brian Isle

- System Analysis and Modeling

System Analysis and Modeling (SA&M) will develop case studies of the enterprise as a whole to define the common cyber-security requirements that extend the company security policy to all domains and organizational units of the enterprise.

Chair – Mr. Dennis Holstein

- US CERT Control System Security Center Industry Group

Provide input to shape the strategy and priorities of the DHS US CERT Control System Security program across key industry sectors with regard to control system vulnerability and security.

Chair – Mr. Jeffrey Hahn

Interest Group news and notes

- **Offering new opportunities to host meetings aside from the PCSF General meetings**
 - Live Meeting
 - Teleconference
- **Opportunities to hold special working group meetings**
- **Marketing material available**
- **Funding**
- **Grow the base**

Congress of Chairs

◆ Active Projects

- Common Glossary
- Standards Assessment Mapping/Framework

◆ Projected

- Information resource geared towards asset owners
- High-level “reference” type of standard at international level
- “Greenfield” assessment of security requirements. Assessment will then map existing activities to requirements, and determine where there are holes.

Common Glossary

Purpose

- **Identifying terminology differences facilitates alignment**
- **A combined glossary saves new groups**
 - Effort of developing their own glossary
 - Proliferating new terms

Progress

- **6 Groups contributed their glossaries**
 - ISA
 - API
 - AGA 12
 - FIPS 200
 - ISA SP99
 - NIST SP800-53
- **Combined glossary and differences on CoC site**

Standards Situation Assessment/Framework

Purpose

- **Prepare a template to track at a high level each activity related to process control security (PCSF Congress of Chairs)**
 - Identify activity sponsor and point of contact
 - Product of work, standard, guide, recommended practice, report, technical paper, etc.
 - End-user requirements addressed
 - Status of work
 - Coupling to other activity
 - Qualifying remarks
- **Identify overlaps and deficiencies in existing standards and guidelines with respect to control system cyber security (KEMA)**
- **A Summary of Control System Standards Activities in the Energy Sector (National SCADA Test Bed)**

Standards Situation Assessment/Framework

Progress/Conclusions

- **PCSF CoC**

- Preliminary list tracks 36 activities, assessment of user requirements addressed

- **KEMA**

- No standards/guidance addresses all control system cyber security attributes
- Need to make sure that standards meant for controls systems address control system-unique issues

- **NSTB**

- Establish joint standards teams - gains more “traction” than each organization acting in isolation.
- Identify areas for mutual support to find solutions so that the standards can be finalized.
- Isolate and focus on solutions to shared (common) critical problems.
- Address technology gaps before policy and best practices are put in place (e.g., develop protocol aware firewalls for communication and control.)

Governance

- **Interim Governing Board - Provides guidance on issues of strategy, management, legal matters, process, and conflict resolution**
 - Chair
 - Vice Chair - Bill Rush
 - Forum Director - Robert Clerman
 - Tom Flowers (Electric Industry)
 - Mark Heard (Chemical Industry)
 - Seth Johnson (Water and Waste Management)
 - Hank Kenchington (National Labs)
 - R. Russell Rhinehart (Academia)
 - Bryan Singer (Vendor Community)
 - Keith Stouffer (Government)
 - David Poczynek (Oil & Gas Industry)

Governing Board Elections

- ◆ **Half of the seats up for election in Spring 2006**
- ◆ **Nominations Committee**
 - Non-voting chair selected by the Interim Governing Board
 - Volunteers from PCSF participants
 - Selection criteria
 - E-mail secretariat@pcsforum.org if interested
 - Established by December 15, 2006
- ◆ **Call for Nominations**
 - Deadline April 15, 2006
- ◆ **Committee Votes**

Web site improvements

◆ Reference Library

- Initial requirements and recommendations provided by an IGB sub-committee
- New technical advisory committee
- E-mail secretariat@pcsforum.org if interested

◆ Knowledge Base

◆ Document Collaboration

Q&A

SCADA Security Summit

- ◆ **Hosted by the SANS Institute**
- ◆ **The PCSF will:**
 - Assist the SANS Institute with the planning of the SCADA Security Summit
 - Offer the services of our Control Systems Research Interest Group
 - Provide a venue for continued collaboration after the summit has concluded

SCADA Security Summit

Mr. Alan Paller
Director of Research, The SANS Institute



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SAFETY Act

David A. McWhorter, Ph.D.

Michael Friedman, Esq.



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