

Research Panel

Lightning talks on research projects directly relevant to users and vendors of SCADA and process control systems

Moderator: Ulf Lindqvist

Co-organizer: Zach Tudor



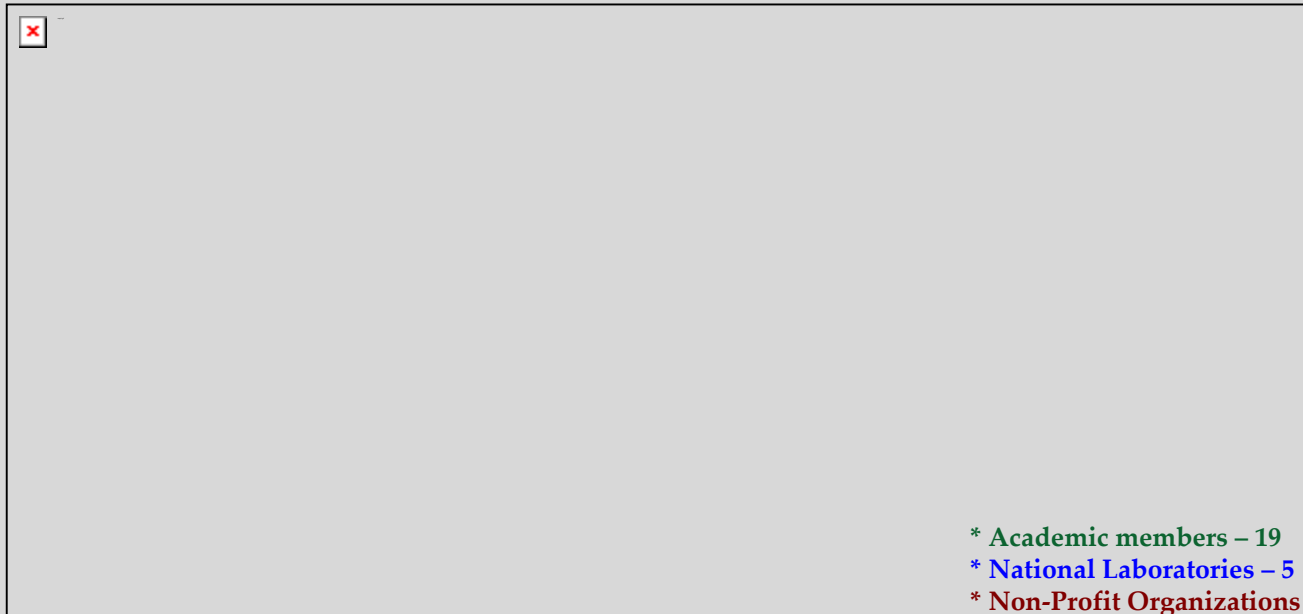
The Institute for Information Infrastructure Protection

A consortium of leading universities, national laboratories and non-profit institutions dedicated to strengthening the cyber infrastructure of the United States

The I3P

- ✿ Helps secure critical infrastructures by identifying vulnerabilities and devising technical solutions
- ✿ Conducts cutting-edge research in cyber security
- ✿ Partners with industry to meet real-world needs
- ✿ Brings multi-disciplinary focus to broad-ranging issues
- ✿ Hosts regular workshops to engage and educate stakeholders

27 Member Consortium



- * Academic members – 19
- * National Laboratories – 5
- * Non-Profit Organizations - 3

Research



Process Control Systems



Business Rationale



Digital Identity



Insider Threat

Cyber Security Program Areas

• Information Infrastructure Security

- Domain Name System Security (DNSSEC)
- Secure Protocols for the Routing Infrastructure (SPRI)
- Cyber Security Assessment

• Cyber Security Research Tools and Techniques

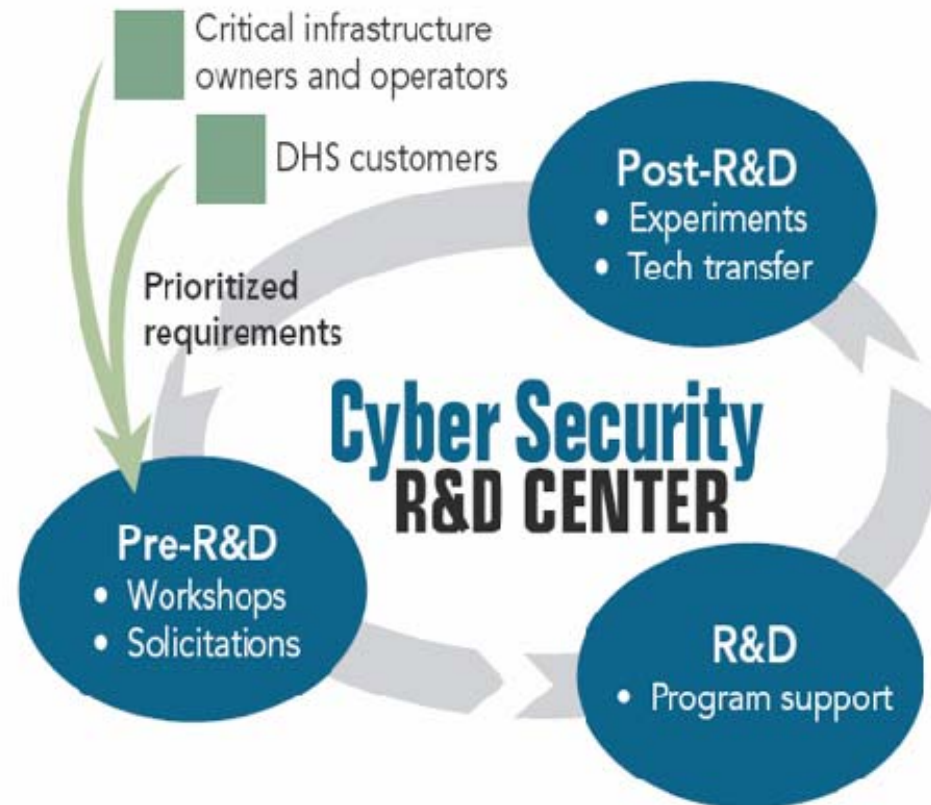
- Cyber Security Testbed (DETER)
- Large Scale Datasets (PREDICT)
- Experiments and Exercises

• Next Generation Technologies

- BAA 04-17: 17 Awards
- BAA 07-09: 14 Awards

• Other Activities

- SBIR, RTAP, Emerging Threats, ITTC, Outreach, Government Coordination




Department of Energy - NSTB Project Fact Sheet

http://www.oe.energy.gov/1126.htm

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You are here: DOE Home > OE Home > Our Work > Control Systems Security > NSTB Project Fact Sheet

U.S. DOE/OE National SCADA Test Bed Supports

To help advance the U.S. Department of Energy (DOE) National SCADA Test Bed's (NSTB) efforts to enhance control system security in the energy sector, DOE's Office of Electricity Delivery and Energy Reliability (OE) recently awarded a total of nearly \$8 million to fund five industry-led projects:

- **Hallmark Project.** Will commercialize the Secure SCADA Communications Protocol (SSCP), which marks SCADA messages with a unique identifier that must be authenticated before the function is carried out, ensuring message integrity. (Lead: Schweitzer Engineering Laboratories; Partners: Pacific Northwest National Laboratories, CenterPoint Energy) ([PDF 789 KB](#))
- **Detection and Analysis of Threats to the Energy Sector (DATES).** Will develop intrusion detection systems (network-, host-, and device-level), event correlation framework, and a sector-wide, distributed, privacy-preserving repository of security events. (Lead: SRI International; Partners: ArcSight, Sandia National Laboratories, ERCOT) ([PDF 831 KB](#))
- **Cyber Audit and Attack Detection Toolkit.** Will extend the capability of existing vulnerability scanning tools to evaluate SCADA security configurations, and develop templates for a security event monitoring system. (Lead: Digital Bond; Partners: Tenable Network Security, OSisoft, Constellation Energy, PacifiCorp, TVA) ([PDF 781 KB](#))
- **Lemnos Interoperable Security Program.** Will conduct testing, validation, and outreach to increase the availability of cost-effective, interoperable security solutions for Internet Protocol (IP)-based communications. (Lead: EnerNex Corp.; Partners: Schweitzer Engineering Laboratories, TVA, Sandia National Laboratories) ([PDF 838 KB](#))
- **Protecting Intelligent Distributed Power Grids Against Cyber Attacks.** Will develop a risk-based critical asset identification system and optimize integrated and distributed security systems to establish the best topology for networking security components. (Lead: Siemens Corporate Research; Partners: Idaho National Laboratory, Rutgers Center for Advanced Energy Systems) ([PDF 1 MB](#))

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OE - 417
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Electricity Advisory

Interactive

Today's Speakers

- Secure and Reliable Wireless Networks for Critical Infrastructure Facilities
 - Bryan Richardson, Sandia National Laboratories
- Access Policy Tool (APT): Verification of Security Policy Implementation
 - David Nicol, University of Illinois at Urbana-Champaign
- Field-level Situational Awareness: Challenges and Solutions
 - Mauricio Papa, University of Tulsa
- Detection and Analysis of Threats to the Energy Sector (DATES)
 - Alfonso Valdes, SRI International

R&D Reception

- Join us at the end of the day for an informal gathering
 - Meet the speakers and other researchers
 - Find out more about today's hot research topics and emerging solutions
 - Let the researchers know what your issues and concerns are
 - Bring your business cards
- Upcoming events featuring R&D
 - March 3-4, 2009: Cybersecurity Applications and Technology Conference for Homeland Security (CATCH), Washington, DC
www.cyber.st.dhs.gov/events.htm
 - April 28, 2009: The 5th Annual I3P Process Control Systems Security Workshop, Houston, Texas
www.thei3p.org/events/pcs_april09.html