Industrial Information and Control Systems Security

A Government Perspective

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We’re good at this ...
Challenges 1(3)

- **Critical infrastructures are dependent on control systems**
  - Economic prosperity and national (homeland) security
  - A cross-sector issue – interdependencies
  - There is a legacy – but things move fast now ...
  \[ \Rightarrow \textit{Government must play an active role} \]

- **Critical infrastructures are operated by private actors**
  - Regulation vs. self-regulation?
  - Many stakeholders (POC?)
  \[ \Rightarrow \textit{Private public partnerships} \]

- **Weak competence in society**
  - Varying level of maturity between sectors
  \[ \Rightarrow \textit{Awareness and training on all levels} \]
Challenges 2(3)

• Integration between Control Systems and business systems (public networks)
  ⇒ Same risks as the ‘internet world’

• The use of standard components (COTS)
  ⇒ The role of the vendor is changing (integrator)
  ⇒ Interoperability
  ⇒ Increasing demands on end-users

• The ’culture clash on the plant floor’ continues ...
Challenges 3(3)

• Disturbances in control systems have occurred
  – Lack of information – ‘urban myths’
  – Legal and cultural obstacles to information sharing?
  ⇒ From sharing information to jointly ‘producing’ information

• ‘All-risk approach’ needed to protect control systems
  – Cyber-attacks constitute a credible threat, but there’s also the traditional hazards ...
  ⇒ Both resilience and security
  ⇒ Less threat-driven, more solution oriented

• Multinational control systems vendors
  – Standardization vs. best-practice
  ⇒ International coordination and collaboration – a challenge and a solution
Collaboration and Information Sharing Requires Capacity

- Capacity to generate your own unique knowledge
- Capacity to evaluate and adapt information acquired from others
- Capacity to carry out traditional open source intelligence
MSB Program for Increased Security in Industrial Information and Control System (SCADA)

Technical Platform for Collaboration

Awareness Raising

Information Sharing & Cooperation

Planning & Program Development
Practical Recommendations

- Awareness raising on all levels
- Basic training for process engineers and IT-department
- Separation and defense-in-depth
- Security requirements in procurement

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