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Control System Security Vulnerabilities – Collaborative Mitigation...

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Long Beach

Ernest Rakaczky
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Invensys Operations Management

We work with:



- 23 of the top 25 petroleum companies
- 47 of the top 50 chemical companies
- 19 of the top 20 pharmaceutical companies
- 30 of the top 50 nuclear power plants
- More than 650 fossil power plants

We help produce:

- 23% of the world's chemicals
- 62% of the world's LNG
- 20% of the world's electricity generation
- 36% of the world's nuclear energy generation
- 17% of the world's refined products

- Annual sales US\$ 2 Billion
- 9,000 employees serving 35,000 customers, in more than 200,000 Locations across 180 countries
- Over 585,000 active software licenses

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Taking ownership of “Areas of Responsibility”

Addressing control system security from a strategic approach...

- Areas of a vendor's responsibility
- Each supplier must be positioned to support cyber security requirements within their:
 - **Software Development Lifecycle** – SDL, Testing, Certification, Source Code validation, etc.
 - **Project Execution** – FAT/SAT Security Baseline, Possible Security features and function fully implemented and updated, etc.
 - **Life-Time Support** – Patch Validation, Security updates, vulnerability mitigation, etc.

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The focus - Time

For Complete Mitigation...

Our biggest challenge today is not the where or how, but how quick can we get there...

When and if vulnerability information becomes public....

How do we ensure mitigation information is widely distributed...

How do we validate mitigation is actually implemented....



Mitigation through Collaboration...

ICS-CERT Key in linking and coordinating efforts.... *providing*...



- Non-biased & trusted recommendations
- Liaison between all parties
- Communications
- Possible validation of Mitigation

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Collaborative Focus

Collaboration with...

- User Community
- Government
- Academia
- Research
- Standards Bodies



“We are all on the same Journey and play a role in current and possible future mitigations”

End Goal – Mitigation Implementation....

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Thank You