60 Day Cyber Study
INSA Response

Presented to Melissa Hathaway

Lou Von Thaer - Chair

March 26, 2009

FUNCTIONAL **INSIGHT**

RIGOROUS **ANALYSIS**

PRACTICAL **SOLUTIONS**

INTELLIGENCE **CAPACITY** AND **ADVOCACY**

Agenda

Overview	Lou Von Thaer
Government's Role	John Russack
Multiple Root Structure	Rob Pate
Public/Private Partnership	Steve Cambone
Closing Thoughts	Ellen McCarthy

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INSA Industry Task Force

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Approach

- Guidance: focus on prioritized recommendations and implementation
- Formed blended industry teams
- Worked questions with teams of experts
- Combined inputs and reviewed
- Presented high-level findings

Paper reflects personal rather than company opinions of the experts involved

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Three Questions to INSA

- Government's role in securing the critical infrastructure and private networks
- Impact of moving to a multiple root structure for domain name service
- Define and create the public/private partnership for cyber security

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Key Insights and Summary

- Continue to work technical solutions

- Public/private partnership:
  - Industries need timely information
  - Protect industry when it cooperates
- Government is educator, standard-setter, compliance auditor, and law enforcer
  - Government needs public and industry support

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Government's Role in Securing the Critical Infrastructure and Private Networks

QUESTION 1

What is (or should be) the government's role in securing/protecting the critical infrastructures and private sector networks from attack, damage, etc. (from nation states)?

- What are the minimum standards that must be established?
- How will these standards affect procurement / acquisition policies?

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Government's Role in Securing the Critical Infrastructure and Private Networks

RECOMMENDATIONS

- Create and empower a U.S. Government leadership position
  - Establish White House-level position to lead cyber
  - Codify roles: authorities, responsibilities, and resources
- Develop and set minimum cyber defense requirements
- Enhance attribution and take action
  - Establish communities of interest for improved analytics for attribution

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Government's Role in Securing the Critical Infrastructure and Private Networks

RECOMMENDATIONS

Promote, support, and coordinate information sharing

- Key to multiple INSA cyber security recommendations
- Government-wide FOIA exemption for cyber
- Establish executive branch guidance on cyber CIP information sharing (executive order?)
- Review all applicable law, policy, and procedures dealing with cyber CIP information sharing between government and private sector owners and operators with the goal of better enabling real time information sharing
- Improve the context, timeliness, and value (information should be better tailored to the recipient) of what information the U.S. Government shares with the private sector

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Government's Role in Securing the Critical Infrastructure and Private Networks

RECOMMENDATIONS

What are the minimum standards:

- Consensus Audit Guidelines (CAG) are a good start
- Government-led consortium must own these standards and guidelines
- In addition to CAG, standards need to include:
  - Policies and guidance for Supply Chain Protection
  - Vulnerability analysis of COTS and GOTS software
    - Leverage DHS initiative: "Build Security In"

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Multiple Root Structure

QUESTION 2

How would the security and stability of the Internet be affected if the single, authoritative root were to be replaced by a multiple root structure?

- What would be the economic and technical consequences of a multiple root structure?
- What, if any, influences do you see that may;

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Multiple Root Structure

RECOMMENDATIONS

- Field DNSSEC and continue with single root
- Direct National Communications System and US-CERT to monitor 13 recognized root servers
  - Develop, test, and be prepared to implement contingency plans
- Address multilingual/multi-cultural environment of

to preserve the current Internet governance system

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Public/Private Partnership

QUESTION 3

Our lifestyle is based upon a digital infrastructure that is privately owned and globally operated.

- How do we get to a public/private partnership and action plan that will build protection and security in – and enable information sharing to better understand when it is under a local or global attack (warning)?
- What is the model public/private relationship?
- Who and how will oversight be conducted in the IC and national security community?
- How would you provide common situational awareness?

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Public/Private Partnership

RECOMMENDATIONS

- Private sector increasingly recognizes need for security of the Internet
  - Growing willingness to accept government leadership
- Build on existing public/private partnership models to create "regulatory environment"
  - Purpose is to identify anomalous behavior
  - Result is a more secure operating environment
  - Agreed-upon set of standards
- An acceptance of government authority to sanction anomalous behavior and to enforce agreed-upon standards

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Public/Private Partnership

RECOMMENDATIONS

- Government increase transparency in the regulatory environment
  - Methods for managing environment and defined role of citizens
- Similar public-private examples in international communities
- Aggressively fund private sector R&D in key cyber assurance areas

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Closing Thoughts

- The team is ready to explain all of the recommendations further, if needed
- Paper includes some additional questions that we think ought to be studied
- INSA and its members are ready to assist

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INSA Report Volunteers

Chairman: Lou Von Thaer

Question Leads
Rob Pate
Steve Cambone
John Russack

Contributors
Nadia Short
Scott Dratch
Scott Aken
Greg Astfalk
Zal Azmi
Fred Brott
Lorraine Castro
Jim Crowley
Bob Farrell
Barbara Fast
Dennis Gilbert
Bob Giesler
Tom Goodman
Cristin Goodwin Flynn
Bob Gourley
Dan Hall
Vince Jarvie
Jose Jimenez
Kevin Kelly
Michael Kushin
Bob Landgraf
Joe Mazzafro
Gary McAlum
David McCue
Marcus McInnis
Brian McKenney
Linda Meeks
Billy O'Brien
Marie O'Neill Sciarrone
Marilyn Quagliotti
J.R. Reagan
Dave Rose
Mark Schiller
Andy Singer
Mary Sturtevant
Almaz Tekle
Mel Tuckfield
Ann Ward
Jennifer Warren

INSA
Ellen McCarthy
Frank Blanco
Jared Gruber
Jarrod Chlapowski

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