

OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE



SCORE IWG Activities

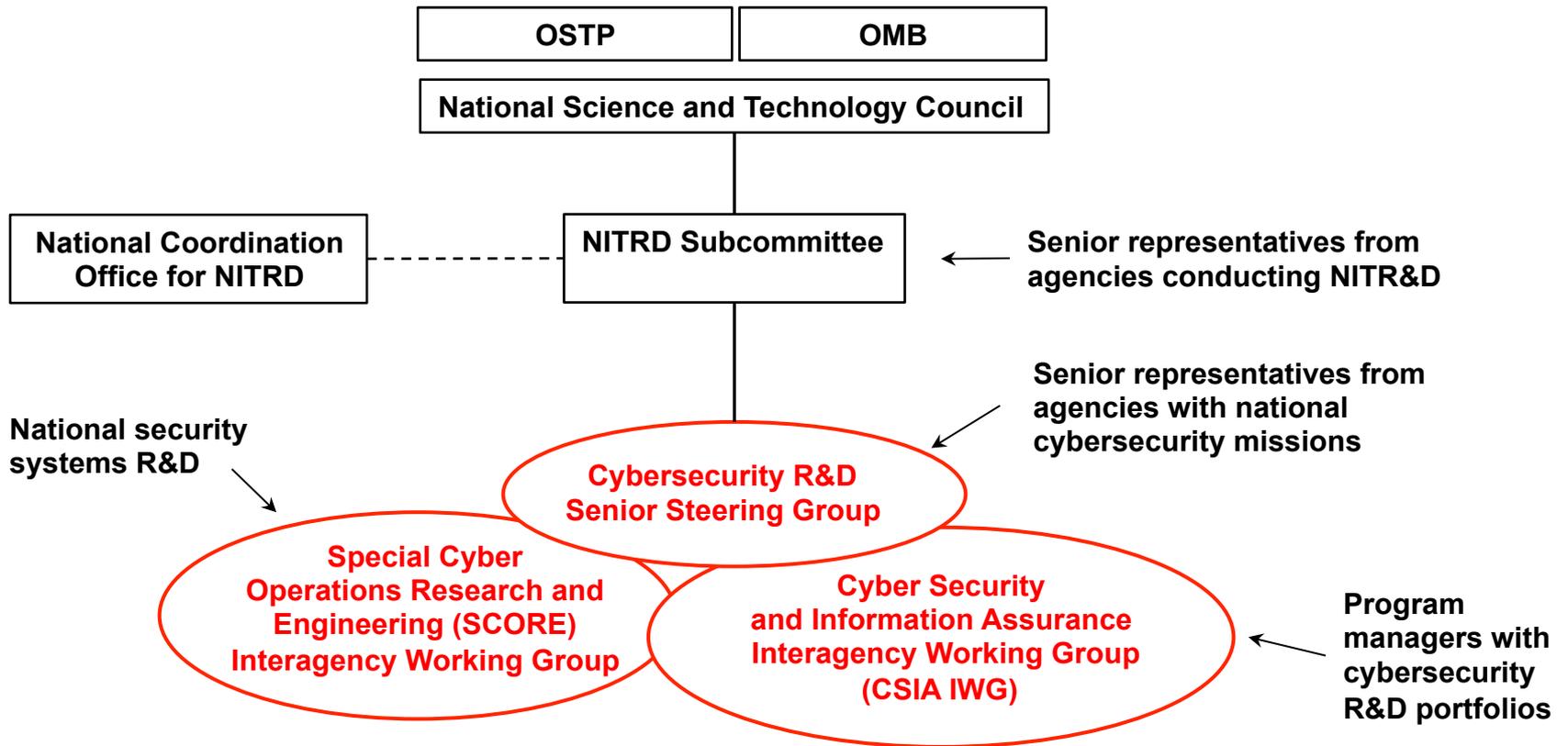
DNI/AT&F/S&T

L E A D I N G I N T E L L I G E N C E I N T E G R A T I O N

William B. Martin
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NITRD Structure for Cybersecurity R&D Coordination





CNCI Initiative 4/9 - SCORE IWG

Activity Highlights

- Conducting coordination and planning activities to bridge the cybersecurity research communities
- Increasing awareness of and insight into cyber-related research and development activities to compel a new way of operating / doing business
- Overseeing research activities supporting the Federal Cybersecurity strategic thrusts:
 - Inducing Change (Game-Changing Themes)
 - Developing Scientific Foundations
 - Maximizing Research Impact
 - Accelerating Transition to Practice

Bridging the Cybersecurity Research Communities





Assumption Buster Workshops

Focused on examining the key assumptions that underlie current security architectures:

- Challenging assumptions to open up the possibilities for novel solutions that are rooted in a fundamentally different understanding of the problem
- Provide for an even stronger basis for moving forward on those assumptions that are well-founded.

Workshop Topics:

- Defense in Depth Is a Smart Investment (March 22, 2011)
- Trust Anchors are Invulnerable (April 27, 2011)
- Abnormal Behavior Detection Finds Malicious Actors (June 20, 2011)
- Current Implementations of Cloud Computing Indicate a New Approach to Security (October 21, 2011)

Highlighted within IEEE Security & Privacy (May 2012)



C3E Workshop Series

Computational Cybersecurity In Compromised Environments (C3E)

Workshop series focused on contributing to the question of how we can enable smart real-time decision making in cyberspace. The workshop provides a forum for presentation, discussion, and collaboration of novel approaches to human machine collaboration to support real-time decision making in a compromised cyberspace.

Workshop Topics:

- **C3E '09 - Analytic Challenge**
 - Infiltrator on the Inside, Bad Neighborhoods, Camouflage
- **C3E '10 - Modeling Activities**
 - Models meet Models, Data, Reality
- **C3E '11 - Predictive Analytics & Interacting Anomalies**
 - Emergent Behavior
- **One-Day C3E Community Meeting w/Challenge Problem (April '12)**
- **C3E '12 - Decision Making & Perception**



Science of Security Virtual Organization

The Science of Security (SoS) Virtual Organization (VO) is established through the collaboration of Federal Agencies to provide a focal point for security science related work and to facilitate the creation of a collaborative community to advance security science.

The SoS VO seeks to provide a wide range of information, networking, and collaboration capabilities:

- **Survey Current Research** – track research projects in ongoing SoS and related security research programs
- **Review Important Announcements** – get news on significant SoS-related activities
- **Find Out What's Happening** – watch for events of interest in the community calendar
- **Connect to Others** – use chat, video conferencing, forums, and online networking
- **Share Your Work** – build wikis, set up special interest groups, upload files & tools, reports, multi-media
- **Discover Resources** – search for people, papers, events, and other items of interest
- **Learn More** – take advantage of educational resources contributed by SoS members and sponsors.

Increasing Awareness and Insight into Cyber-related Research





Journal of Sensitive Cybersecurity Research and Engineering (JSCoRE)

A new journal providing for a peer-reviewed, high-quality venue for publishing sensitive cybersecurity research results; and to make information readily available as appropriate for the sensitivity of the information to a wide-variety of government, academic, and industrial partners. JSCoRE will further provide for the dissemination, review, and reuse of ideas enabling the advancement of science, as well as recognition of the contribution of individuals.

- Highlighted within IEEE Security & Privacy (May 2012)**
- CFP Available (soon): <http://cybersecurity.nitrd.gov/page/jscore>**
- Email: jscore@nitrd.gov**
- First Edition of the Journal expected to be published in April 2013**



Integrated Demonstrations

Activity providing for the integration of technologies developed through government investments in cybersecurity research and development. This integration is focused on demonstrating coherent ways of working that reflects the National cybersecurity game-changing research themes, while demonstrating mission effectiveness.

Seeks to:

- **Showcase CNCI *Inducing Change* Thrust**
- **Emphasize cross-organization coordination**
- **Create enduring catalog of technologies**
- **Communicate benefits and research needs**



Future Research Goals and Directions for Foundational Science in Cybersecurity

National Research Council study to consider future research goals and directions for foundational science in cybersecurity. The committee will:

- **Explore how investments in foundational work support mission needs in the long term.**
- **Review current unclassified and classified cybersecurity research strategies, plans, and programs as well as requirements in both domains.**
- **Consider major challenge problems, explore proposed new directions, and identify gaps in the current portfolio.**



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