



# DSB Newsletter

December 2014



**Dr. Craig Fields, Chairman**

Dr. Eric Evans, Vice Chairman

Mr. David Jakubek, Executive Director

## *Chairman's Corner*

### Welcome to the Fall Board Meeting

Since our last meeting in May 2014, a lot has occurred.

The USD(AT&L) has commissioned eleven new study efforts set to begin in 2015. The study topics cover a broad set of strategically critical issues for the Department:

- Defense Strategies for Advanced Ballistic and Cruise Missile Threats (Mr. Bob Stein & Mr. Jim Carlini)
- Air Dominance (Dr. Mark Maybury & Dr. David Whalen)
- Cyber Deterrence (Mr. James Gosler & The Honorable James Miller)
- Cyber Defense (Mr. Robert Nesbit & Mr. Lou Von Thaeer)
- Next Generation Unmanned Undersea Systems (Dr. Ralph Semmel & Mr. James Shields)
- Cyber Supply Chain (The Honorable Page Hoeper & Dr. John Manfredelli)
- Detering, Preventing and Responding to Threat or Use for Weapons of Mass Destruction (Dr. Miriam John & Dr. William Schneider)
- Summer Study 2015 on Autonomy (Dr. Ruth David & Dr. Paul Nielsen)
- Defense Strategies for Ensuring the Resilience of National Space Capabilities (Dr. Wanda Austin & VADM David Frost, USN Ret.)
- MILSATCOM and Tactical Networking (Dr. Vincent Chan & Mr. Alfred Grasso)

One member, Dr. William Howard, has left the board and a new member has returned to the Board after a short hiatus, Dr. James Tegnalia.

The report on Contractor Logistics Support of Contingency Operations (chair: Dr. Ron Kerber), was released in June 2014.

The Permanent Task Force on Survivability of DoD Systems and Assets to Electromagnetic Pulse (EMP) and Other Nuclear Weapons Effects (NEW) (co-chairs: Dr. Miriam John and Dr. Joseph Braddock) released its third interim report in July 2014. The final task force reports, number four and number five, are completed and awaiting review and release.

The Task Force on Countering Violent Extremism (chair: Mr. Michael Bayer) has completed its study findings and recommendations, and will release the final report in early 2015.

The Task Force on Military Operations in a Complex Electromagnetic Environment briefed its recommendations (co-chairs: Mr. Bob Stein and Mr. Bill Delaney) to USD(AT&L) in July, and to the Deputy Secretary of Defense in September. The final report is nearly complete and will be released early in 2015.

The 2014 Summer Study on Strategic Surprise conducted its final one week session in Boston (co-chairs: Mr. Vince Vitto and Dr. David Whalen) and presented results to Mr. Kendall in late August 2014. The final report is in draft and will be released early 2015.

The Task Force on Energy Systems for Forward/Remote Operating Bases held its kickoff meeting in November 2014 (co-chairs: General Paul Kern (USA Ret.) and Dr. Michael Anastasio). The study will assess different mechanisms to satisfy forward operating base energy requirements, including small modular nuclear reactors.

Finally, it gives me great pleasure to announce Mr. Bob Stein as the recipient of the 2014 Fubini Award. Bob is recognized by his peers as being one of the strongest national-level system and technology thinkers. Many of the studies he has supported or led have been very influential in defining future national security system, technology, or policy directions. Bob's national study work is widely known to be technically deep and creative, and his study involvement is highly sought. Because of his sustained role in providing the highest quality advisory input to the government, Bob has distinguished himself among other strong contributors in advisory roles.

*Dr. Craig Fields*



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## Membership

The Board continues to actively solicit suggestions for highly qualified scientific and technical candidate members, with special emphasis on women and minority candidates. Prior Task Force participation offers an individual, OSD, and the Board an opportunity to determine a person's interest and suitability to Board activities and is a desirable prerequisite to membership on the Board.

## Task Force Status

- **Contractor Logistics Support of Contingency Operations** [chair: Dr. Ron Kerber] The task force, conducted in accordance with section 848 of the National Defense Authorization Act for FY 2011 (H.R. 5136, 150-151), reviewed Department of Defense organization, doctrine, training, and planning for contractor logistics support of contingency operations. Sponsored by USD(AT&L). **Report published June 2014.** (Lt Col Harvey)
- **Countering Violent Extremism** [chair: Mr. Michael Bayer] The task force shall conduct an independent assessment of the Department of Defense strategy to counter violent extremism outside of the United States in accordance with section 1239 of the National Defense Authorization Act for FY 2011 (H.R. 6523, 267-268). Sponsored by USD(AT&L). **TOR signed May 2011, Meetings completed and draft reports under review. Scheduled for publishing January 2015.** (CAPT CoBell)
- **2013 Summer Study on 21<sup>st</sup> Century Military Operations in a Complex Electromagnetic Environment** [Co-chairs: Mr. Bill Delaney and Mr. Bob Stein] The task force will conduct a study of current and emerging EW techniques and capabilities that may face U.S. forces over the next two decades. **TOR signed November 2012. Results briefed to Department leadership July 2014. Report scheduled for publishing February 2015.** (Lt Col Harvey)
- **2014 Summer Study on Strategic Surprise** [Co-chairs: Mr. Vince Vitto and Dr. Dave Whelan] The study will consider what information about any potential adversary may not be sufficiently acted upon in the next decade that will lead to regrets in 2024, and in broad terms what those actions and hedges against changing priorities might be. **TOR signed April 2014. Results briefed to Department leadership August/September 2014. Report scheduled for publishing February 2015.** (CAPT CoBell)

- **Energy Systems for Forward/Remote Operating Bases** [Co-chairs: General Paul Kern, USA (retired) and Dr. Michael Anastasio] The study will assess different mechanisms to satisfy FOB energy requirements, including small modular nuclear reactors. **TOR signed February 2014. Study kickoff November 2014.** (Lt Col Harvey)

- **Defense Strategies for Advanced Ballistic and Cruise Missile Threats** [Co-chairs: Mr. Bob Stein and Mr. Jim Carlini] The purpose of the study is to review current and future ballistic and cruise missile threats, assess the implications of those systems to the survivability of U.S. critical assets, review current U.S. responses to those threats and counter-measures that might nullify those responses, and investigate and prioritize a proposed short- and long-term U.S. response. A key Task Force concern should be the cost-effectiveness of any proposed recommendations. **TOR signed May 2014. Study Kickoff January 2015.** (CAPT CoBell)

- **Cyber Deterrence** [Co-chairs: Mr. James Gosler and The Honorable James Miller] The study will consider requirements for effective deterrence of cyber attack against the U.S. and its allies, and identify critical capabilities to support deterrence, war-fighting, and escalation control. **TOR signed October 2014. Study Kickoff January 2015.** (Lt Col Harvey)

- **Air Dominance** [Co-chairs: Dr. Mark Maybury and Dr. David Whalen] This task force will consider the most effective science, technology, capability and systems for maintaining air dominance beyond the next decade. The Task Force should identify and recommend, in the context of projected threats, strategies to establish and maintain our freedom of action in the air in support of national objectives. **TOR signed October 2014. Study Kickoff February 2015.** (CAPT CoBell)

- **Next-Generation Unmanned Undersea Systems** [Co-chairs: Dr. Ralph Semmel & Mr. James Shields] The task force should explore roles and missions for candidate unmanned undersea systems with emphasis on leveraging the advantages in the undersea domain to disrupt adversary strategies both undersea and in other domains, focusing on technical capabilities and operational concepts that could result in low-cost, rapidly developed systems that enable cost-imposing strategies. **TOR signed October 2014. Study Kickoff February/March 2015.** (CAPT CoBell)

- **Cyber Defense** [Co-chairs: Mr. Robert Nesbit & Mr. Lou Von Thær] The purpose is to investigate methods to assess the level of cyber protection that

currently exists and is planned within DoD networks, sensing, weapon and support systems. **TOR signed October 2014. Study Kickoff March 2015.** (Lt Col Harvey)

- **Detering, Preventing, and Responding to the Threat or Use of Weapons of Mass Destruction** [Co-chairs: Dr. Miriam John and Dr. William Schneider] The purpose of this study is to identify ways in which deterrence against WMD can evolve given a changing security environment, and should deterrence alone prove inadequate, then identify additional ways to prevent and respond.. **TOR signed November 2014. Study Kickoff February 2015.** (CAPT CoBell)

- **Cyber Supply Chain** [Co-chairs: The Honorable Page Hooper and Dr. John Manfredelli] The purpose of this study is to review the DoD supply chain risk management activities, including case reviews of specific acquisition program application and the resulting outcomes. The task force will assess whether current practices are able to effectively mitigate malicious supply chain risk, and whether opportunities exist to modify or strengthen practices to increase the effectiveness of current practices. **TOR signed November 2014. Study Kickoff March/April 2015.** (Lt Col Harvey)

- **2015 Summer Study on Autonomy** [Co-chairs: Dr. Ruth David and Dr. Paul Nielsen] The purpose of this study is to identify the science, engineering, and policy problems that must be solved to permit greater operational use of

autonomy across all warfighting domains. The study will assess opportunities for DoD to enhance mission efficiency, shrink life-cycle costs, and reduce loss of life through the use of autonomy. **TOR signed November 2014. Study Kickoff February 2015.** (Lt Col Harvey)

- **Defense Strategies for Ensuring the Resilience of National Space Capabilities** [Co-chairs: Dr. Wanda Austin, Ph.D., and VADM David Frost, USN Ret.] This study will identify and recommend strategies to enhance the net resilience of our national security space enterprise including those critical elements provided by our international partners and the commercial sector. **TOR signed December 2014. Study Kickoff April 2015.** (Lt Col Harvey)

- **Military Satellite Communication and Tactical Networking** [Co-chairs: Dr. Vincent Chan & Mr. Alfred Grasso] The study will review the current US military satellite communication and tactical networking capabilities, identify shortfalls within existing and planned capability development, and then propose mid- and long-term system and technology improvements needed to allow effective complex operations against advanced threats. **TOR signed December 2014. Study Kickoff April 2015.** (Lt Col Harvey)

## *Permanent Sub-Committees*

- **Nuclear Weapons Surety**
  - No recent activity.
- **Nuclear Weapons-Survivability of DoD Systems and Assets to EMP and other Nuclear Weapons Effects**
  - Task Force Completed: Operations terminated and final reports currently in review.

## Updates from Other Boards



**Chairman – Dr. Werner Dahm**  
**Vice Chairman – Dr. Iain Boyd**  
**Military Director – Lt. General Ellen Pawlikowski, USAF**  
**Executive Director – Lt. Col. Tilghman Rittenhouse, USAF**

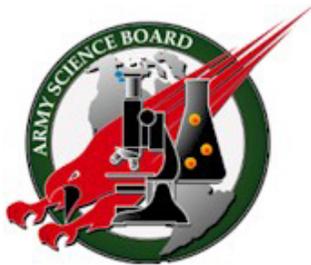
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This year's SAB is made up of 54 experts among the nation's top civilian scientists and engineers on matters of science and technology relating to the Air Force mission. The group was tasked by the Secretary of the Air Force and Chief of Staff of the Air Force to conduct studies on the cyber vulnerabilities of embedded systems in air and space systems; enhanced utility of unmanned air vehicles in contested and denied environments; and Utility of Quantum Systems for the Air Force.

FY15 Studies:

- Cyber Vulnerabilities of Embedded Systems on Air And Space Systems
- Enhanced Utility of Unmanned Air Vehicles In Contested and Denied Environments
- Utility of Quantum Systems for the Air Force

The studies will be completed by the end of June 2015 and then be briefed to the Secretary of the Air Force, Chief of Staff of the Air Force, and other Air Force senior leadership. The information and recommendations of the SAB will then be used to shape and guide Air Force policy.



## Army Science Board (ASB)

**Chairman – Mr. George Singley**  
**Vice Chairman – Dr. James Tegnalia**  
**Executive Secretary – COL William Mclagan**

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FY 2014 studies:

- Air and Missile Defense Electronic Warfare (EW) Assessment—This study will assist the Army by conducting a comprehensive assessment of the EW posture of the Army's Air and Missile Defense systems and their ability to operate in an advanced EW environment.
- Decisive Army Strategic and Expeditionary Maneuver—This study will identify challenges in 2025 that effect the Army's ability to conduct strategic and expeditionary maneuver; explore options in joint air- and sea basing, commercial capabilities and partnering opportunities to improve the Army's ability to maneuver; and identify technologies and other innovations that could improve the Army's strategic and expeditionary maneuver capabilities.
- Talent Management and the Next Training Revolution—This study will develop a concept of talent management that the Army should use to describe individuals and teams through 2030; examine current

technologies and trends employed in talent management, to include recruiting, training, and retention; and develop a roadmap for the employment of promising talent management systems, associated technologies, and best practices, taking into consideration the unique nature of military service.

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**Chairman – Dr. James Bellingham**  
**Vice Chairman – VADM William C. Bowes, USN (Ret)**  
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**STATUS:** Currently Awaiting Membership Approval

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**Chairman – Mr. Robert “Bobby” Stein**  
**Vice Chairman – Mr. Richard Spencer**  
**Executive Director – Ms. Phyllis Ferguson**  
**Deputy Director – Mr. Michael Bohn**

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For FY14, the DBB had 15 recommendations. Since 2002, the DBB has issued 71 reports on best practices for the Department in the areas of Executive Management, Finance & Audit, Human Resources & Compensation, Economics, Technology, and Healthcare.

#### 2014 Reports

- Implementing Best Business Practices for Major Business Processes in the Department of Defense

#### 2013 Reports

- Employing Our Veterans Part II: Service Member Transition
- Taking Advantage of Opportunities for Commercial Satellite Communications Services
- Applying Best Business Practices from Corporate Performance Management to DoD

## ***DSB Secretariat Staff***

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## ***Upcoming DSB Meeting Dates***

**10-11 December 2014**  
**25-26 February 2015**  
**20-21 May 2015**  
**4-5 November 2015**  
**24-25 February 2016**  
**18-19 May 2016**  
**2-3 November 2016**  
**15-16 February 2017**  
**17-18 May 2017**  
**1-2 November 2017**  
**7-8 February 2018**  
**16-17 May 2018**  
**7-8 November 2018**

**Fall Board Meeting**  
**Winter Board Meeting**  
**Spring Board Meeting**  
**Fall Board Meeting**  
**Winter Board Meeting**  
**Spring Board Meeting**  
**Fall Board Meeting**  
**Winter Board Meeting**  
**Spring Board Meeting**  
**Fall Board Meeting**  
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**Spring Board Meeting**  
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Dr. James Bellingham, Naval Research Advisory  
Committee

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