



DSB Newsletter

May 2012



Dr. Paul Kaminski, Chairman

General Lester Lyles, USAF (retired), Vice Chairman

Mr. Brian Hughes, Executive Director

Chairman's Corner

Welcome to the Spring Quarterly Meeting

Since our last Quarterly meeting in February, a flurry of activity has taken place on the DSB. Our Summer Study for 2012 is forming quickly as the TOR was signed in March. This year's study is entitled—“Defense Science Board Study on Technology & Innovation Enablers for Superiority in 2030,” and will focus on emerging technologies that will enable the next generation of dominant military capabilities to be in development or fielded by 2030. The various panel leads are engaged in planning a road map for successful completion later this year.

As our Cyber Initiative nears the final report-writing phase, many inquiries are already coming in throughout the Department requesting out-briefs from both the Cyber Resiliency Metrics for Military Systems (co-chairs Mr. Jim Gosler and Mr. Lou Von Thaer), and the Cybersecurity and Reliability in a Digital Cloud (co-chairs Dr. Eric Evans and Dr. Robert Grossman). We look forward to the completion and publishing of both reports later this summer.

Additionally, the Predicting Violent Behavior Task Force (co-chairs Ms. Judith Miller and Mr. Larry Lynn) is finalizing its report. The Role of Autonomy in Department of Defense (DoD) Systems Task Force (co-chairs Dr. Robin Murphy, Mr. Jim Shields) is finalizing its report as well and we look forward to results of this significant study

After much effort, our congressionally directed task force on Contractor Logistics Support of Contingency Operations is nearing the administrative stand-up process and will commence meeting very shortly.

As we are all aware, the summer can be a very busy time for everyone. With many, significant studies in work, we continue to appreciate the focused, combined efforts from our Members who so graciously volunteer their time and talents to produce valuable advice and wise counsel to the Department. We ask that you please continue your strong support in as many DSB projects as your schedules allow.

Dr. Paul Kaminski

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

- **Role of Autonomy in Department of Defense (DoD) Systems** [co-chairs: Dr. Robin Murphy and Mr. James Shields]. This study will inform the Department's plans as it introduces significant numbers of unmanned platforms. It will deliver a roadmap for realizing as rapidly and efficiently as possible the battlefield potential of autonomous systems. Sponsored by USD(AT&L). **TOR signed March 2010, finalizing report.** (CDR Reinbold)
- **Assessment of Nuclear Treaty Monitoring and Verification Technologies** [co-chairs: Dr. Miriam John and Dr. Donald Kerr]. This study will assess the adequacy of the nation's technical tools to support monitoring and verification, both as part of the cooperative verification regimes of the treaties and through national intelligence. Sponsored by USD(AT&L), NNSA, and the DNI. **TOR signed April 2010, finalizing report.** (CDR Reinbold)
- **Basic Research** [co-chairs: Dr. Lydia Thomas and Dr. Craig Fields]. This study assessed matters relating to departmental planning and managing the defense basic research program. Sponsored by USD(AT&L). **TOR signed August 2010, Report released February 2012.** (CDR Reinbold)
- **Predicting Violent Behavior** [co-chairs: Mr. Larry Lynn, Ms. Judith Miller]. This study will examine governmental and non-governmental programs and best practices to establish standards, training, reporting requirements/mechanisms, and procedures for assessing predictive indicators relating to pending violence. Sponsored by USD(AT&L) and USD(P). **TOR signed October 2010, finalizing report.** (CDR Reinbold)
- **Cyber Resiliency Metrics for Military Systems** [co-chairs: Mr. Jim Gosler, Mr. Lou Von Thær]. This study will examine how to effectively measure the resiliency of military systems relative to various cyber attacks and adversaries, as a first step toward quantifying and developing systematic methods and standards to improve the resiliency of these systems and our confidence in the same. Sponsored by USD(AT&L). **TOR signed May 2011, task force in progress.** (CDR Reinbold)
- **Cybersecurity and Reliability in a Digital Cloud** [Co-chairs: Dr. Eric Evans, Dr. Robert Grossman] The task force will evaluate all aspects of providing reliable, secure, and responsive services for military and intelligence applications using a digital cloud, a richly networked, distributed core of data storage and computational resources. Sponsored by USD(AT&L). **TOR signed May 2011, task force in progress.** (CDR Reinbold)
- **Contractor Logistics Support of Contingency Operations** [chairs: pending] The task force shall carry out a review of Department of Defense organization, doctrine, training, and planning for contractor logistics support of contingency operations. It is in accordance with section 848 of the National Defense Authorization Act for FY 2011 (H.R. 5136, 150-151). Sponsored by USD(AT&L). **TOR signed March 2012, membership forming.** (CDR Reinbold)
- **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. It is 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, membership forming.** (CDR Reinbold)
- **Defense Science Board Study on Technology & Innovation Enablers for Superiority in 2030 (Summer Study 2012)** [co-chairs: Dr. Jim Tegnalia and Mr. Jim Shields]. The task force will conduct a study of the emerging technologies that will enable the next generation of dominant military capabilities to be in development or fielded by 2030. **TOR signed March 2012, membership forming** (CDR Reinbold)

Permanent Sub-Committees

- Nuclear Weapons Surety
 - No recent activity.
- Nuclear Weapons-Survivability of DoD Systems and Assets to EMP and other Nuclear Weapons Effects
 - No recent activity.

Updates from Other Boards



Chairman – Dr. Eliahu Niewood
Vice Chairman – Dr. Rami Razouk
Military Director – Lt Gen Mark Shackelford
Executive Director – LtCol Matthew Zuber

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Army Science Board (ASB)

Chairman – Mr. George Singley
Vice Chairman – vacant
Executive Secretary – Ms. Carolyn Nash

ASB Secretariat: 703-617-0258
Website:
<https://www.alt.army.mil/portal/page/portal/oasaalt/ASB>

Current Army Science Board Studies

Strengthening Sustainability and Resiliency of an Expeditionary Force

Create an overarching architecture of a Brigade Combat Team's requirements for external support, including water, food, fuel, ammunition, etc and how that affects their capabilities. From the systems perspective-the study will be broken into subcommittees to address the following:

1. Fuel, energy and water usage both for the mounted and dismounted soldier
2. Cost of delivering the fuel to the expeditionary units
3. DOTMLPF approaches to reducing consumption, exploiting local resources, improving logistics for these consumables
4. Identification of technologies that could improve efficiency or reduce utilization
5. Long term alternative fuel sources and technologies to reduce eliminate dependence upon oil

Soldier Resilience and Performance Sustainment

This study will identify the characteristics of excellent performance in an individual soldier, identify meaningful metrics correlated with characteristics of the best-fit soldier, determine the effect of performance degraders such as fatigue, nutrition, pharmaceuticals, disease, and anxiety and examine methodologies to enhance as well as sustain performance.

Non-cooperative Biometric Metrics

This study will examine collection devices with regards to range, illumination techniques, frequency spectrums, and

data formats and develop recommendations on (1) how to define and identify non-cooperative biometric thresholds and objectives, and (2) data fusion methodologies, that will provide confident actionable identification.



PROGRAM EXECUTIVE OFFICER: RADM MATTHEW L. KLUNDER USN

DEPUTY PROGRAM EXECUTIVE OFFICER: BGEN MARK R. WISE USMC

PROGRAM DIRECTOR: MR. WILLIAM H. ELLIS JR

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Chairman – Mr. John Goodman

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At its April 19th meeting, the Defense Business Board deliberated and approved recommendations on the "Linking and Streamlining the Defense Requirements, Acquisition, and Budget Processes" study. This study, tasked by the VCJCS and led by Arnold Punaro, provided recommendations on how DoD should improve the current Joint Capabilities Integration and Development System (JCIDS). A copy of the briefing may be found at [http://dbb.defense.gov/pdf/Re-engineering the Requirements and Acquisition Systems Post Meeting Brief.pdf](http://dbb.defense.gov/pdf/Re-engineering_the_Requirements_and_Acquisition_Systems_Post_Meeting_Brief.pdf).

In response to a tasking by the Secretary of Defense, Ned Powell led a task group "Promoting Veterans Employment through Concurrent Credentialing." This study was also deliberated and approved at the April 19th meeting. The Task Group recommended options to allow the Military Services to award professional credentials and licenses concurrent with military training and improve servicemember access to credentialing and licensing programs. A copy of the briefing may be found at http://dbb.defense.gov/pdf/DBB_Concurrent_Credentialing_Post_Meeting_Brief.pdf.

The Board also has a study in progress on "Leveraging Public-Private Collaboration to Augment the Department of Defense's Mission". This study, signed out by the VCJCS and led by Jack Zoeller, is reviewing how the Department is using public-private collaborations, identifying their merits, and providing recommendations on how PPCs might be better utilized across DoD. The terms of reference may be found at http://dbb.defense.gov/pdf/Public_Private_Collaboration_TOR.pdf. The Task Group plans to present its findings and recommendations at the Board's July 19, 2012 meeting.

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Upcoming DSB Meeting Dates

- **TBD – Summer Quarterly Meeting**
- **October 24-25, 2012 – Fall Quarterly Meeting**

Defense Science Board Members and Ex Officio

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VICE CHAIRMAN

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Dr. Miriam E. John, Private Consultant

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Gen Larry D. Welch, USAF (Ret.), Institute for Defense Analyses

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Dr. Elvera Ehrenfeld, Private Consultant

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Mr. Al Grasso, Mitre Corporation

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Dr. Robin R. Murphy, Texas A&M

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Dr. Lydia W. Thomas, Private Consultant

Mr. Lou Von Thaer, General Dynamics

Dr. Robert L. Wisnieff, IBM

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