



DSB Newsletter



Oct 2003

Dr. William Schneider, Jr., Chairman

Mr. Vince Vitto, Vice Chairman

Mr. Brian Hughes, Executive Director

Chairman's Corner

Special congratulations to Gen Larry Welch, winner of this year's Fubini Award. With over 45 years of dedicated public service, Gen Welch is truly deserving of this prestigious award.

The 2003 Summer Study conclusion was remarkably successful. These studies broke new ground and are making an impact of the Department's thinking in these areas. Thanks to the chairmen and their cast of task force members for the hours of work and immense intellectual capital invested in these efforts.

DoD Roles and Missions in Homeland Security

Co-Chairs: ADM Don Pilling, USN (Ret.) and Mr. Don Latham

Future Strategic Strike Forces

Co-Chairs: Mr. Vince Vitto and ADM Dennis Blair, USN (Ret.)

Several suggestions for the 2004 summer study and upcoming task force topics have been made. These ideas will be evaluated and acted upon in the near future. As new task forces are initiated, I am certain that we will be able to use the expertise and capabilities of every member in support of the ongoing tasks in the Department of Defense.

Dr. William Schneider, Jr.

DSB MEETING DATES FOR 2004

- 4-5 February 2004 – Winter Quarterly
- 12-13 May 2004 – Spring Quarterly
- 2-13 August 2004 – Summer Study in Irvine, CA
- 20-21 October 2004 – Fall Quarterly

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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. The roster of current Board members is included in this newsletter.

Staff Changes

No changes to report.

Task Force Status

- **2003 Summer Study: DoD Roles and Missions in Homeland Security** (Co-Chairs: ADM Don Pilling, USN (Ret), and Mr. Don Latham) The study, co-sponsored by USD(AT&L), Assistant to the Secretary of Defense (Nuclear, Chemical, and Biological Defense Programs), Under Secretary of Defense (Policy), and Northern Command (NORTHCOM), is tasked to address the Department of Defense (DoD) roles and missions in homeland security. **The Final Report is in Draft.** (LTC Dolgoff)
- **2003 Summer Study: Future Strategic Strike Forces** (Co-Chairs: Mr Vince Vitto and ADM Dennis Blair, USN (Ret)) The study, co-sponsored by USD(AT&L) and the Director, Defense Systems will assess the

future strategic strike force needs of the Department of Defense. **The Final Report is in Draft.** (LtCol Basl)

- **Operation Enduring Freedom Lessons Learned** (Chair: Gen James McCarthy, USAF (Ret)) This study, co-sponsored by USD(AT&L), VCJS & CENTCOM, is examining current activities of Operation Enduring Freedom to determine both near- and long-term technical and operational considerations that could be used to improve this operation and future campaigns initiated in the War Against Terrorism. **The Phase III report of has been released. Phase IV is in progress.** (LTC Dolgoff)
- **Intelligence in Support of the War Against Terrorism** (Co-Chairs: Dr. Joe Markowitz and ADM Bill Studeman, USN, (Ret.)) This study, co-sponsored by USD(AT&L), the Assistant Secretary of Defense (Command, Control, Communication, and Intelligence), and the Director of Central Intelligence will identify capabilities, technologies and approaches for strengthening intelligence in support of the war against terrorism. **Final Report distribution approved by USD(AT&L) on 20 October 2003.** (CDR Waugh)
- **Defense Against Clandestine Nuclear Attack** (Co-Chairs: Dr. William Graham and Dr. Richard Wagner) This study, co-sponsored by USD(AT&L) and the Assistant to the Secretary of Defense (Nuclear and Chemical and Biological Defense Programs), will assess the adequacy of the U.S. ability to

detect, identify, respond, and prevent unconventional nuclear attacks by terrorist or sub-national entities. **The Final Report is in Draft.** (LTC Dolgoff)

- **Interference Capabilities** (Chairman: Mr. Peter Marino) This task force, co-sponsored by USD (AT&L), the Director of Central Intelligence, and the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence), is tasked to identify any potentially high-payoff and high-threat capabilities and understand the impact of any new capability on current and future systems. The Task Force should strive to understand the phenomenology of any proposed capability. **The Final Report is in Security Review.** (CDR Waugh)
- **Unmanned Aerial Vehicles (UAVs) and Uninhabited Combat Aerial Vehicles (UCAVs)** (Co-Chairs: MGEN Ken Israel, USAF (Ret) and Mr. Bob Nesbit) This task force, co-sponsored by USD (AT&L), the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence), and the Director, Strategic and Tactical Systems, is tasked to conduct a comprehensive review of the Department's plans for development and fielding of UAV and UCAV systems. **The Final Report is in Draft.** (CDR Waugh)
- **Seabasing** (Co-Chairs: Dr. Bill Howard and ADM Don Pilling, USN (Ret)) This Task Force, co-sponsored by USD (AT&L), the Secretary of the Navy, and the Director, Defense Systems, is tasked to assess how seabasing of expeditionary forces can best serve the nation's defense needs through at least the first half of the 21st century. **Final Report distribution approved by USD(AT&L) on 20 October 2003.** (CDR Waugh)
- **Unexploded Ordnance - UXO** (Co Chairs: Dr. Delores Etter and Mr. Bill Delaney) This study, co-sponsored by USD(AT&L) and the Deputy Under Secretary of Defense (Installations and Environment), is chartered to address ways to reduce the extremely high cost of UXO clean up and identify

technologies to help minimize the environmental impact of continued live-fire training and testing. **The Final Report is in Draft.** (LTC Dolgoff)

- **Smallpox Vaccine Down Select Process** (Chairman: Dr. George Poste) This Task Force, co-sponsored by USD (AT&L) and the Assistant to the Secretary of Defense (Nuclear and Chemical and Biological Defense Programs), is tasked to perform an independent evaluation of the Department of Defense and Department of Health and Human Services smallpox vaccine candidates. **The Final Report is in Draft.** (CDR Waugh)
- **Managing Foreign Intelligence by Focusing on Ends vice Means** (Co-Chairs: Dr. Craig Fields and Dr. Joe Markowitz) This study, co-sponsored by USD(AT&L) and the Assistant Secretary of Defense (C3I), will address alternative ways of managing US foreign intelligence endeavors in support of national security, by focusing not on the means by which intelligence information is collected, but rather the ends it is to serve. **The Final Report is in Draft.** (CDR Waugh)
- **Missile Defense Phase III (Modeling and Simulation)** (Co-Chairs: Gen Larry Welch (USAF, Ret) and Dr. William Graham) This study, co-sponsored by USD(AT&L) and the Missile Defense Agency (MDA), will assess the scope of the modeling and simulation effort, the fidelity and validity of simulations, and additional opportunities for M&S contribution to BMDS development and evaluation. **The Final Report is in Draft.** (LtCol Basl)
- **Enabling Joint Force Capabilities** (Co Chairs: Gen Larry Welch (USAF, Ret) and Dr. Bob Hermann) This study, co-sponsored by USD(AT&L) and the Chairman, Joint Chiefs of Staff, is chartered to review and understand the current state of assigned responsibilities and accountability for joint capabilities, identify unfilled needs and areas,

and recommend further steps to strengthen the joint structure's ability to quickly integrate service-provided force capabilities. **The Phase I report has been released. Phase II of the Task Force is in progress.** (LTC Dolgoff)

- **Integrated Fire Support in the Battlespace** (Co-Chairs: Mr. Vince Vitto and Mr. Bob Nesbit) This study is co-sponsored by USD(AT&L); Commander, Joint Forces Command; Director, Defense Advanced Research Projects Agency; and the Director, Defense Systems. The task force is chartered to assess: the adequacy of current and proposed munitions; Intelligence Surveillance and Reconnaissance (ISR) techniques and mechanisms; the adequacy of battlefield command and control and integration techniques; the current impediments to a fully integrated Air, Land and Sea fire support; and the need for predictive engagement tools and derived intelligence products. **The Task Force is in progress.** (CDR Waugh)
- **Quarantining Guidance for the Severe Acute Respiratory Syndrome (SARS) Epidemic** (Chairman: Dr. Joshua Lederberg) This study, co-sponsored by USD(AT&L) and the Assistant Secretary of Defense (Health Affairs), is chartered to assess quarantining guidance for the Severe Acute Respiratory Syndrome (SARS) epidemic, to include existing doctrine and process by which quarantine policy is generated; methods, technologies and legal doctrine to allow safe transport of personnel through quarantined areas; identification and tracking of exposed individuals; and features of SARS guidance which may be applicable to future infectious disease outbreaks. **The Task Force is in progress.** (CDR Waugh)
- **Patriot System Performance** (Co-Chairs: Gen Mike Williams, USMC (Ret) and Mr. Bill Delaney) This study, co-sponsored by USD(AT&L) and the Director, Defense Systems, is chartered to assess the recent performance of the Patriot System in

OPERATION IRAQI FREEDOM from deployment through use across the threat spectrum, to include logistical, doctrine, training, personnel management, operational and material performance. The Task Force should also understand the causes of all fratricide incidents during OPERATION IRAQI FREEDOM **The Task Force is in progress.** (CDR Waugh)

- **DARPA Technology Review** (Chairman: Mr Phil Odeen) This study, co-sponsored by USD(AT&L) and the Director, Defense Advanced Research Projects Agency (DARPA), is chartered to perform a one-time independent evaluation of DARPA's technology investment, ensuring that the current technology portfolio is based on sound, proven scientific and technological foundations, practices and methods, and are of high value to DoD's operational missions. **The Task Force is in progress.** (LtCol Basl)

[DSB Reports published since May 2003:](#)

- **DSB/AFSAB Joint Task Force on Acquisition of National Security Space Programs (May 2003)**
- **Training for Future Conflicts (June 2003)**
- **Wideband Radiofrequency Modulation (July 2003)**
- **Discriminate Use of Force (July 2003)**
- **Role and Status of DoD Red Teaming Activities (Aug 2003)**
- **Joint Experimentation (Aug 2003)**
- **Enabling Joint Force Capabilities, Phase I (Aug 2003)**

Army Science Board (ASB)

Dr. Joe Braddock – Chairman

Dr. James Tegnelia – Vice Chairman

COL Jeff Willey - Executive Secretary

Mr. Wayne Joyner - Executive Assistant

FY03 Overarching Studies

The ASB conducted its two week report writing session at the University of California, Irvine Beckman Center on 14 - 24 July, 2003. The session culminated with an outbriefing to senior Army leadership. About two dozen senior Army leaders attended the outbriefs, engaged the briefers in robust discussions and generally concurred with the findings, recommendations and conclusions of each study.

The two FY03 Summer Study topics undertaken by the ASB were:

Force Protection Technologies for the 2010-2020 Timeframe. (Co-chaired by Mr. Gilbert Herrera, Mr. Frank Kendall, and Dr. Marygail Brauner). The study assessed threats to the force in the 2010-2020 timeframe and suggested technologies that hold promise for addressing those threats. Due to the current Global War on Terrorism, this study also focused on current threats and technologies immediately available to better protect our troops.

Challenges and Opportunities in Developing Increments II and III Future Combat Systems (FCS) (Co-chaired by Dr. Frank Akers, Dr. Warren Morrison, and Dr. Bob Douglas). This study focused on identifying promising technologies to improve the lethality of weapons and achieve high survivability of soldiers and platforms. We were asked to suggest technology insertion priorities and assess technical and integration risks affecting the accelerated transition of technology into the FCS. The study examined information management challenges resulting from the expansion of C4ISR capabilities that leverage future sensors, processors, and novel platforms and the difficult task of automating sensor and data fusion for large numbers of sensors to enable: automated target weapon pairing, augmented soldier-in-the-loop decision-making.

FY04 Overarching Studies

The ASB will conduct two Summer Studies and

two Special Studies for FY04.

The two Summer Studies are:

Force Balance Study. (Co-chaired by Dr Joe Braddock, LTG (R) Bill Campbell and Mr. Bill Yeakel). This study characterizes both the capability enhancement synergisms and the distribution of resourcing risks between Current and Future Force options.

FCS II Study. (Co-chaired by Mr. George Singley, LTG (R) John Miller and Dr. Tony Hyder). This study will examine critical technologies and capabilities for Future Combat Systems (FCS) in urban combat and stabilization operations.

Special Studies

Combat Identification Study. (Chaired by LTG (R) Jack Woodmansee). This quick turn-around study examines combat identification strategies for both the Current and Future Forces.

Directed Energy Weapons Study. (Co-chaired by Dr. Greg Canavan, GEN (R) Malcolm O'Neil and Dr. Mike Wartell). This study examines the implications of directed energy weapons and devices on the future battlefield.

All studies are just getting underway. The ASB is conducting a joint plenary session 27-28 October that will kick-off the two Summer Studies. During this plenary session, senior Army leaders will address the ASB membership and provide study guidance, direction and focus.

For more information on the ASB visit:
<https://webportal.saalt.army.mil/SARD-ASB/default.htm>

Naval Research Advisory Committee (NRAC)

Mr. John M. “Jack” Bachkosky – Chair
Dr. Robert C. Spindel – Vice-Chair
CAPT Dennis L. Ryan, III USN (Ret.) -
Program Director

The NRAC conducted three studies this past quarter which were briefed to the Deputy Assistant Secretary of the Navy for Research, Development, and Testing at the conclusion of the Summer Study on 1 August 2003 in San Diego. The three studies were:

Science and Technology in FORCENet This study was chaired by Mr. Joseph Y. Rodriguez and co-chaired by Ms. Teresa Smith. The purpose of the study was to define the concepts and science and technology (S&T) initiatives, including those in the space, atmospheric, surface and subsurface environments, required to achieve the visions of FORCENet and Sea Power 21.

Technology Acquisition Reform This study was chaired by Mr. Mark Lister and co-chaired by Mr. Richard Rumpf. The purpose of the study was to recommend alternative approaches to technology acquisition that could be implemented within the Department of the Navy's acquisition system.

Electromagnetic Gun Technology Assessment This was a short fused study commissioned by the Assistant Secretary of the Navy (Research, Development, and Acquisition) chaired by Mr. Jack Bachkosky. The objectives of this review were to provide a technical assessment of the status of Electromagnetic Gun (EM) technology and the potential for achieving the revolutionary performance associated with this concept for Naval Applications.

Subsequently, these briefs have been presented to various Navy and Marine Corps Flag Officers and Department of the Navy Senior Executive Service members. Currently, reports containing the briefs are in preparation.

Also during this quarter, two reports from last year's study were released. Those two reports are: *Roles of Unmanned Vehicles* and *Technology for Base Security*. The first report was approved for public release while the second report was approved for release within the government only.

The next quarter will be spent in determining the topics for next year's Summer Study.

For more information on NRAC activities visit <http://nrac.onr.navy.mil/webspace>

Air Force Scientific Advisory Board (SAB)

Dr. Daniel E. Hastings - Chair
Ms. Heidi Shyu - Vice Chair
Lt Gen John D.W. Corley - Military Director
Col Charles D. Bowker - Executive Director

FY03 Summer Session and Study Outbriefs

The SAB met from 15 - 27 June 2003 for its annual Summer Study Session at the National Academy of Sciences and Engineering Beckman Center in Irvine, California. Members completed the *Unmanned Aerial Vehicles in Perspective: Effects, Capabilities, and Technologies*; *CONOPS and Technology to Support Long-Range Strike Operations*; and *Technology for ISR Machine-to-Machine Integration* studies. All three studies were outbriefed to the Secretary of the Air Force at the end of the Summer Study Session. The *Unmanned Aerial Vehicles* and *Long-Range Strike* studies were outbriefed to the Chief of Staff of the Air Force on 31 July 2003. The *Machine-to-Machine* study will be outbriefed to the Chief on 22 October 2003.

FY04 Fall General Board Meeting

The Air Force Scientific Advisory Board held its annual Fall General Board Meeting from 8 - 9 October 2003 at the SAFTAS Conference Center in Rosslyn, VA. Members were briefed by the Secretary, Under Secretary, and Chief of Staff of the Air Force, as well as the Air Force Material Command Commander and the SAB Military Director. In addition, the J-3, Director of Defense Research and Engineering, Deputy Director of the Defense Advanced Research Projects Agency, Army Science Board, Defense Science Board, and Naval Research and Advisory Council briefed the Board.

Following tradition, the SAB honored departing Members during Fall Board. Decorations for Exceptional Civilian Service were awarded to Mrs. Natalie W. Crawford and Dr. Ronald P. Fuchs. Decorations for Meritorious Civilian Service were awarded to Dr. Alison K. Brown, Prof. Claude R. Canizares, Dr. Thomas A. Cruse, Dr. O'Dean P. Judd, Dr. Antonio F. Pensa, Lt Gen (Ret) Everett H. Pratt, Jr., USAF, Dr. Eugene H. Spafford, and Dr. Gerold Yonas. Decorations for Exemplary Civilian Service were awarded to Mrs. Teresa F. Lunt, Dr. Christine M. Mitchell, Dr. Kenneth C. Pedersen, and Dr. Michael Shatz.

The Board also welcomed to its ranks Dr. J. Douglas Beason, Mr. Timothy M. Bonds, Dr. Mica R. Endsley, Mr. Scott D. Fouse, Dr. Kenneth F. Galloway, Dr. Wolfgang G. Knauss, Dr. David E. Luzzi, Dr. Louis C. Marquet, Dr. James B. "JB" Peterson, Mr. Philip L. Soucy, Dr. William R. Swartout, Dr. Barbara A. Wilson, and Dr. Peter R. Worch.

Science & Technology Quality Reviews

AFOSR was reviewed 25 - 30 August 2003 and the FY'04 Science & Technology Quality Review Kickoff meeting was held 29-30 September 2003 at the National Academy of Sciences and Engineering Woods Hole Research Center. In addition, the Air Force Research Laboratory's Munitions, Human Effectiveness, Materials and Manufacturing, Air Vehicles, and Information Systems Directorates will be reviewed during October and November 2003.

Advisory Groups

The AFC2ISR Center Advisory Group met in October 2003. The 311 Human Systems Wing Advisory Group will meet in November 2003.

Publishing Status

The following study is awaiting security and publication clearance from OSD and the Air Staff:

- Subsequent volumes of *Sensor Technology for Difficult Targets*

The following studies have been published and

distributed:

- *Air Force Command and Control: The Path Ahead, Volume 2*
- *Immediate Attack in Deep and Hostile Territory*
- *Predictive Battlespace Awareness to Improve Military Effectiveness, Volume 2*

Upcoming Events

The FY04 Kickoff Meeting will be held 13 - 14 January 2004 at the SAFTAS Conference Center. The FY04 SAB studies on *Operationalizing Space Launch* and *Networks to Enable Coalition Operations* will commence.

To request further information or submit comments email Paul.Hazell@pentagon.af.mil

The DIA Advisory Board

Dr. Michael Wartell – Chairman

Mr. Frank Kendall – Vice Chair

Ms. Jane McGehee – Program Manager & Executive Secretary

The first DIA Advisory Board meeting for FY04 will be held 3-4 November at the Defense Intelligence Analysis Center on Bolling Air Force Base. This meeting will close out several previous studies which covered diverse subjects, including defense intelligence transformation and strategies for the underground facilities analysis center. The Board will turn toward implementing the Director's proposed directional changes in collection, analysis, and information management. In support of this, the Board has organized into three similarly named sub-panels for FY04. The Board determined that culture, process, and technology are germane to each of the three focus areas and therefore will consider these during their deliberations. The next scheduled full board meeting is 10-11 February, 2004.

Defense Science Board Active Task Forces

Green – Army Mil Assist

Light Blue – Air Force Mil Assist

Dark Blue – Navy Mil Assist

ID	Task Force	TOR Date	Finish	May '03	Jun '03	Jul '03	Aug '03	Sep '03	Oct '03	Nov '03	Dec '03	Jan '04
1	ENDURING FREEDOM LESSONS LEARNED	12/14/01	10/31/03	Phase IV in Progress								
2												
3	INTELLIGENCE IN SUPPORT OF WAR AGAINST TERRORISM	1/10/02	10/31/03	In Distribution								
4												
5	DEFENSE AGAINST CLANDESTINE NUCLEAR ATTACK	4/9/02	10/31/03	Final Report in Draft								
6												
7	INTERFERENCE CAPABILITIES	6/26/02	10/31/03	Final Report in Security Review								
8												
9	UNMANNED AERIAL VEHICLES & UNINHABITED COMBAT AERIAL VEHICLE	7/15/02	6/30/03	Final Report In Draft								
10												
11	SEABASING	9/4/02	6/30/03	In Distribution								
12												
13	UNEXPLODED ORDNANCE	9/26/02	7/28/03	Final Report In Draft								
14												
15	SMALLPOX VACCINE DOWNSSELECT	10/2/02	7/28/03	Final Report In Draft								
16												
17	INTELLIGENCE ENDS VICE MEANS	12/19/02	10/17/03	Final Report In Draft								
18												
19	MISSILE DEFENSE PHASE III (MODELING & SIMULATION)	1/30/03	9/30/03	Final Report in Security Review								
20												
21	ENABLING JOINT FORCE CAPABILITIES, PHASE II	2/3/03	12/19/03	Final Report in Progress								
22												
23	INTEGRATED FIRE SUPPORT	6/3/02	10/31/03	In Progress								
24												
25	QUARANTINING GUIDANCE FOR SARS	6/11/02	10/31/03	In Progress								
26												
27	PATRIOT SYSTEM PERFORMANCE	6/3/02	10/31/03	In Progress								
28												
29	DARPA TECHNOLOGY REVIEW	10/2/03	11/28/03	In Progress								
30												
31	2003 SS: DoD ROLES & MISSIONS IN HOMELAND DEFENSE	1/3/03	11/20/03	Final Report In Draft								
32												
33	2003 SS: FUTURE STRATEGIC STRIKE FORCES	1/31/03	11/20/03	Final Report in Security Review								

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