



# *DSB Newsletter*



February 2002

Dr. William Schneider, Jr., Chairman  
Mr. Vince Vitto, Vice Chairman  
Executive Director

John V. Ello,

## *Chairman's Corner*

As we begin another year of important new study initiatives, I want to first take this opportunity to express my deepest appreciation and that of the entire Board Membership to Phil Odeen for the outstanding leadership he has provided to the DSB as Vice Chairman over the past 5 years. My sincere thanks as well goes to Vince Vitto as he now assumes the position as new Vice Chairman of the Board.

I also want to welcome the following new members to the Defense Science Board:

<i>Dr. William F. Ballhaus</i>	<i>Mr. William P. Delaney</i>
<i>GEN William Hartzog, USA (Ret)</i>	<i>Dr. Delores M. Etter</i>
	<i>Mr. Albert E. Smith</i>

With regard to our new study initiatives, our 2002 Summer Study Program has now been finalized and will be dealing with the following critical issues:

**Missile Defense:**

Co-Chairs: Gen Larry Welch, USAF (Ret) and Dr. Bill Graham

**Special Operations and Joint Forces in Support of Countering Terrorism:**

Co-Chairs: Dr. Ted Gold and Mr. Don Latham

In addition to these summer study efforts, the Board is also in the process of initiating several other important studies as a result of the tragic events of 9/11, dealing with Bioterrorism; Nuclear Terrorism; and *Enduring Freedom* Lessons Learned, among several others that are on the drawing board.

With the continuing strong support of the DoD Senior leadership, I am confident that the 2002 Board will continue its longstanding tradition of providing timely and considered advice in support of the Department of Defense and our nation's national security, and I look forward to working closely with all of you to make that happen in the challenging months that lie ahead.

*Dr. William Schneider, Jr.*

## ***DSB MEETING DATES FOR 2002***

- Winter Quarterly February 27-28, 2002
- Spring Quarterly May 15-16, 2002
- Summer Study Conclusion August 5-16, 2002
- Fall Quarterly Meeting October 23-24, 2002

## DSB Secretariat Staff

**Mr. John V. Ello**, Executive Director  
**Ms. Brenda Leckey**, Executive Officer  
**Ms. Patricia A. Shirley**, Executive Assistant  
**CDR Brian Hughes**, Navy Military Assistant  
**LTC Carla Kendrick**, Army Military Assistant  
**LtCol Roger W. Basl**, Air Force Military Assistant

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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. An overall roster of current Board members is included in this newsletter.

## Staff Changes

Congratulations to Lieutenant Colonel Roger Basl, our Air Force Military Assistant, who recently pinned on his new rank.

## Task Force Status

- **2002 Summer Study: Missile Defense** (Co-Chairs: Gen Larry Welch & Dr William Graham) The study, co-sponsored by USD(AT&L) and MDA, will initially report on five areas: counter-countermeasures; boost phase technology; battle management and command, control, and communications; international cooperation; and the evolution of ballistic missile threats. (LtCol Basl)
- **2002 Summer Study: Special Operations and Joint Forces in Support of Countering Terrorism** (Co-Chairs: Dr. Ted Gold & Mr. Don Latham) The study, co-

sponsored by USD(AT&L), JFCOM and S&TS, will address how the Department of Defense can strengthen the military operational capability of its special operations forces and other joint forces against potential terrorist threats and other asymmetric threats. (CDR Hughes)

- **2001 Summer Study: Defense S&T** (Co-chairs: Mr. Larry Lynn & Dr. Anita Jones) The study co-sponsored by USD(AT&L) and DUSD(S&T) addressed issues involved to assure the U.S. continues to gain access to and develop technology from which to gain military advantage. The Task Force is drafting the final report. (LtCol Basl)
- **2001 Summer Study: Precision Targeting** (Co-chairs: Mr. Vince Vitto & Mr. Robert Nesbit) The study co-sponsored by USD(AT&L) and Director, Strategic and Tactical Systems, examined the full range of the process from target selection, location and identification through mission execution and damage assessment. The final report has now been published. (CDR Hughes)
- **Chemical Warfare Defense** (Co-chairs: Dr. George Whitesides & Dr. Regina Dugan) This study, co-sponsored by USD(AT&L) and DARPA, is assessing the possibility of controlling the risk and consequences of a CW attack to acceptable levels within the next five years. The Task Force is drafting a final report. (LTC Kendrick)

- **E-Commerce** (Co-chairs: Dr. Ron Kerber & Dr. Mike Frankel) This study, co-sponsored by USD(AT&L) and Director of Defense Procurement, is reviewing the DoD's current implementation status of e-commerce tools. Appropriate recommendations will be made to enhance this opportunity for cost reduction, capital and manpower efficiency. The Task Force has drafted a final report. (LTC Kendrick)
- **Intel Needs for Homeland Defense (Follow-on)** (Co-Chairs: Dr. Ruth David and Mr. Peter Marino) The study, sponsored by USD(AT&L), ASD(C3I) & DCI, explored the intelligence ramifications posed by biological, chemical, information, nuclear, and radiological threats to the United States. The final report has now been published. (CDR Hughes)
- **Training for Future Conflicts** (Co-chairs: Dr. Joe Braddock & Dr. Ralph Chatham) This study, co-sponsored by USD(AT&L) and Director for Readiness and Training in OUSD(P&R), is a follow-on to the Jan 2001 Training Superiority & Training Surprise report. The Task Force will identify and characterize the education and training demanded by JV 2020 which are markedly different from what is being done today. Operating under a revised TOR with added emphasis on joint and interoperability training, the Task Force should produce a report in July 2002. (LtCol Basl)
- **Aircraft Carriers of the Future** (Chairman: Dr. Bill Howard; Vice Chairman: ADM Don Pilling, USN (Ret.)) This study, co-sponsored by USD(AT&L) and Director, Strategic & Tactical Systems will concentrate on the increased need to fulfill the presence and warfighting mission that aircraft carriers perform. The carrier battle group has been the mainstay of our combat-credible forward presence and the Task Force should examine its applicability and potential for transformation in the future. The Task Force is in progress. (CDR Hughes)
- **Vulnerability Assessment** (Co-chairs: Dr. Joshua Lederberg & Mr. Michael Bayer) The study, sponsored by USD(AT&L), was tasked to provide an analytic framework for assessing potential terrorism attacks on CONUS within the next 12 months. (LtCol Basl)
- **Discriminant Use of Force** (Co-Chairs: Dr. Joshua Lederberg & Dr. Ted Gold) This study, co-sponsored by USD(AT&L) and S&TS, will conduct a comprehensive study of the ends and means, of the nuanced use of force, in concert with coalition partners, to achieve political, economic and moral changes in countries affecting U.S. interests. The Task Force is in progress. (LtCol Basl)
- **Defense Against Terrorists' Use of Biological Weapons** (Co-Chairs: Dr. Anna Marie Skalka & Mr. Larry Lynn) This study, co-sponsored by DARPA and DTRA, will assess the scope of activities conducted by the DoD to ensure its ability to respond to an attack of the U.S. homeland by terrorists using biological weapons. The Task Force is in progress. (CDR Hughes)
- **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 Task Force is in progress. (LTC Kendrick)

#### **DSB Reports Published Since October 2001:**

##### **OCTOBER:**

- **Managed Information Dissemination**

##### **DECEMBER:**

- **2001 Summer Study: Precision Targeting**

##### **JANUARY:**

- **Intelligence Needs for Homeland Defense**

## **Other Advisory Board**

### **Army Science Board (ASB)**

**Mr. Michael J. Bayer – Chairman**

**COL Kevin M. Dietrick - Executive Secretary**

**MAJ Bob Grier – Executive Officer**

Mr. Michael Bayer will step down on 1 March 2002 as the ASB Chair after serving an extraordinary 48 months. He will conclude his selfless service to the Board as a member of the 2002 Summer Study Red Team. Dr. Joe Braddock will assume the Chair of the Army Science Board.

Mr. Bayer began serving his country in 1968 when he completed Field Artillery Officer Candidate School and was commissioned a second lieutenant. He retired from the Army National Guard in 1991 as a Colonel. His public service career began in 1977 when he was appointed Counsel to Representative Clarence J. Brown of Ohio. In 1981 he was appointed Deputy Assistant Secretary of Energy and in 1982 he became the Associate Deputy Secretary of Commerce. After working in the private sector from 1984 to 1990, Mr Bayer was named Counselor to the President's Commission on Aviation Security and Terrorism in January of 1990. From October 1990 until April 1992, he served as the Federal Inspector for the Alaska Natural Gas Transportation System. His volunteer service to the Army and the Department of Defense includes member of the Board of Visitors of the United States Military Academy (1986-88), Army Science Board member (1990-92), and as a member of the Secretary of Defense's Reform Task Force (1997). Mr. Bayer served on the Department of Defense transition team in 2001 and was recently named to the Defense Business Board. He is active in the Association of the United States Army, serving on the Advisory Board of Directors. Mr. Bayer had a tremendous impact on the Army Science Board and will be sorely missed.

As the winner of the 1999 Fubini Award, Dr. Joe Braddock takes the helm with an impressive

record of public service going back over 40 years. His record of service with DoD advisory boards includes: Army Science Board (1977-83, 1994-present), the Defense Science Board (1984-1993), the National Security Agency Scientific Advisory Group (1974-1983), and the Defense Special Weapons Agency Advisory Group (1977-1983 and 1990-1993). In addition to his membership on the DSB, he has served as the Chairman of numerous Task Force efforts, as well as having served as a member on others. He has also served many years in an advisory capacity to Sandia National Laboratories. Dr. Braddock also serves numerous community causes pro bono including the American Red Cross, Inova Hospital System and numerous foundations, educational institutions, and industry associations.

### **FY02 Overarching Study**

**Ensuring the Financial Viability of the Objective Force** (Chaired by Mr. George Singley III, GEN John Vessey, USA (Ret), and LTG Max Noah, USA (Ret)). This study will address all aspects of the contributions to currently projected Operations and Sustainment (O&S) costs of the existing and yet to be fielded components of the force. It will provide technology and management alternatives to Army leaders that will offer cost savings across the Army.

The study will identify critical O&S activities and related cost drivers, examine methods to leverage commercial practices, and suggest approaches to improve training and reduce the associated time and costs.

The Study is organized into seven panels:

Training and Education (Co-chaired by Mr. Neale Cosby and GEN Paul Gorman, USA (Ret)) The panel will examine ways to reduce the cost associated with training and education by reducing the number of Mission Operational Specialties, leveraging distance learning, developing learning skills in initial entry soldiers, and incorporating embedded training capabilities in Objective Force systems.

Logistics (Co-chaired by Mr. Chuck Vehlow, GEN Lee Salomon, USA (Ret), and VADM Bill Hancock, USN (Ret)) The panel will examine reasons for increases in operational costs per mile and flight hour for ground and aviation systems, examine supply chain efficiencies and ways to better leverage information technologies to improve the same, and the impact of accelerating fielding of systems to replace aging more maintenance intensive systems.

Infrastructure (Co-chaired by Mr. Rich Gronda, Mr. Bill Hansen, and Mr. Charlie Nemfakos) The panel will address the costs associated with running all the camps, posts, and stations. They will look at efficiencies gained by regional support contracts, consolidated facilities, process reengineering, and eliminating redundancies.

Human Resources (Co-chaired by Mr. Kim Wincup, LTG Bill Hilsman, USA (Ret.), and MG Fred Lawson USA (Ret.)) This panel will look at the effects of reducing personnel turbulence by increasing time on station to promote retention and improve readiness, the increasing costs of the healthcare system, implementing unit replacement versus individual replacements, the effects of restructuring the layers of organization in units and downsizing staffs and headquarters, and leveraging the reserve component to a greater degree to reduce OPTEMPO.

Innovation (Co-chaired by Mr. Dennis Carlson and GEN Donn Starry, USA (Ret)) The panel will focus on structuring effective units, transforming combat support operations, establishing information architectures to include automated assistance for decision makers and combatants, and reforming the research, development, and acquisition process.

Acquisition and Technology (Co-chaired by Dr. Jim Tegnelia, Dr. Larry Delaney, and Mr. Srinivasan Rajagopal) The panel will look at web centric information systems for split based operations enabling a smaller forward presence, leveraging commercial components and processes, and the utility and efficacy of unmanned systems both in combat and combat service support roles.

Integration and Analysis (Co-chaired by Dr. Seth Bondar, Dr. Bob Douglas and GEN Dave Maddox, USA (Ret)). This panel will work to integrate the recommendations and findings of the other panels.

The Study is scheduled to report out in a briefing to the Army Leadership and a Joint audience on 25 July 2002 at the Beckman Center in Irvine, California.

### **Special Studies**

- **Aviation Study.** This study will commence in the second quarter of 2002 and will examine possible roles and missions for both manned and unmanned aerial vehicles in the Objective Force. Sub-topics include arming unmanned systems, teaming manned and unmanned systems, applications for unmanned systems in combat support and service support roles, and air-to-air combat applications.
- **Robotics Study.** (Chaired by Dr. Prasanna Mulgaonkar) This study is in full swing and is examining autonomous systems and technologies with potential applications within the Objective Force. We are exploring the challenges of commanding and controlling (man-machine interfaces) robotic devices, robotic technologies and capabilities projected for the 2015-2020 timeframe and identifying apparent voids in the same. Initial findings and recommendations are expected during the first quarter, FY02.

Dr. William E. Howard, Mr. Ed Brady, and Dr. Stuart Starr are assisting the Air Force Scientific Advisory Board on their Summer Study, *Predictive Battlespace Awareness*.

Mr. Gilbert Herrera, Mr. Frank Kendall, Dr. Irene Peden, Dr. Edward Reedy and Dr. Michael Wartell are supporting a joint study, *Science and Technology Community in Crisis Panel*, headed by the Naval Research Advisory Committee.

For more information on ASB studies and terms of reference visit:

[http://www.saalt.army.mil/SARD-ASB/A-study\\_table.htm](http://www.saalt.army.mil/SARD-ASB/A-study_table.htm)



## Naval Research Advisory Committee (NRAC)

**Ms. Katherine C. Hegmann - Chair**  
**CAPT Dennis L. Ryan III USN (Ret.) -**  
**Program Director**

The NRAC is currently preparing for the coming year's studies as well as completing two studies already in progress. The new study topics are scheduled to be selected in March. Additionally, the Chair and Vice Chair are completing their service and a new Chair and Vice Chair have been nominated. Professor William F. Weldon is the prospective Chair and Mr. John M. (Jack) Bachkosky is the prospective Vice Chair.

**Science and Technology (S&T) Community in Crisis** This joint study with the Army Science Board and the Air Force Scientific Advisory Board, is sponsored by the DDR&E. The fourth meeting was 5-6 February 2002. This study will:

1. Consider what the role(s) of the DoD labs should be in the 21<sup>st</sup> Century. Focus will be on the components devoted primarily to performing Science and Technology (S&T) work in-house. Identify the differences that do or should exist between S&T-oriented research labs and technical centers performing mostly acquisition support, in-service engineering, and higher-category R&D work.
2. Identify the desired characteristics of a world-class S&T laboratory in terms of professional staff, infrastructure, budgeting process, support services, etc.
3. Review the most relevant and important past studies of the labs to assess the current relevance of their primary recommendations.
  - a. Assess the benefits of those that were implemented and the continued applicability of those not adopted.
  - b. Prioritize those that promise the greatest potential for attracting and retaining a world-class scientific and engineering staff.
  - c. Identify possible reasons for past

interaction, and recommend approaches to improve the opportunities for favorable action.

4. Assess the implementation status and impact of recent legislative initiatives directed to improving the DoD labs.
5. Assuming that future roles for these organizations can be identified, recommend both near-term steps and a long-term strategy for ensuring the excellence of the Service S&T laboratory system for the next 25 years. As a minimum, address the following areas:
  - a. Scientist and Engineer recruitment, reward and retention;
  - b. Lab facilities, equipment and infrastructure;
  - c. Support services quality and control;
  - d. Identify any Service-unique approaches.

**Aging Aircraft** Sponsored by the Commander, Naval Air Systems Command, this study will identify the current state of need of legacy Naval Air Systems for inspection, repair and overhaul due to aging; identify known mitigation opportunities; link the needs and mitigation opportunities to Science and Technology Objectives for Platforms, Subsystems and Processes in the current Naval Technology Plan; and provide recommendations for technology transition across the board, Naval Technology Planning, and product/process technology insertion opportunities for the future. The panel has met and the final brief is nearing completion.

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

## **Air Force Scientific Advisory Board (SAB)**

**Dr. Robert Selden – Chairman**  
**Dr. Ron Fuchs – Vice Chairman**  
**Lt Gen Steven Plummer, USAF - Military Director**  
**Col Marian Alexander, USAF – Executive Director**

### **FY 01 Studies**

**Sensors For Difficult Targets** (Chaired by Dr. Antonio Pensa; Executive Officer, Capt Kent Broome).

#### **Background**

Sensor technology and associated data processing and communication have evolved rapidly over the last decade. The vision of realistically achievable military capabilities needs to be updated along with the technology investment strategy and future operational capability planning. This is especially true for the difficult ground targets that the Air Force must deal with in today's world. These targets include moving and time critical targets, targets in urban areas, and targets where deception or concealment is involved. Adversaries are attempting to prevent us from finding the targets by hiding underground, under trees, in cities, and by using electronic and physical decoys and other deception techniques.

#### **Charter**

The study examined the following issues:

- Multiple sensing modalities (UWB radar, hyperspectral, SIGINT, MASINT, etc.)
- Sensor and data fusion.
- Sensor-to-weapon timelines.
- Signal processing and transmission (e.g., levels of onboard processing, data compression).
- Operational concepts for attacks against difficult targets.
- System concepts to support the operational concepts (i.e., continuous coverage, multi function sensing platforms, micro UAVs).

The study organized and presented its findings to give a perspective on sensor technology focused on future military capabilities to the senior leadership of the Air Force. The study included a Red Team that considered study conclusions

about technologies and systems, and reasonable countermeasures.

The study provides conclusions and recommendations on the following topics:

- An assessment of the performance and readiness of sensor technologies to address the difficult targets identified in this study.
- Operational concepts and associated systems concepts utilizing these technologies.
- Prioritization and goals appropriate for a top-level technology investment strategy.

The results of the study were briefed to the Secretary and Chief of Staff of the Air Force in the Pentagon on 26 September 2001. The report is currently undergoing a security review, and is scheduled for publication in April 2002.

**Availability and Survivability of Militarily Relevant Commercial Space Systems** (Chaired by Dr. Daniel Hastings; Executive Officer, Maj Timothy Kelly).

#### **Background**

Military operations are increasingly dependent on space-based assets for threat warning, surveillance, reconnaissance, and communications. The DoD has also become increasingly dependent on commercial systems as a major augmentation of military space systems. This has been most evident with commercial satellite communications and, more recently, commercial imagery and radar products. Recent DSB and SAB studies have addressed the survivability of military space assets but have not provided a satisfactory strategy for assuring the availability of commercial services.

#### **Charter**

The study accomplished the following tasks:

1. Reviewed current Air Force and other DoD use of and reliance on commercial space systems and project the use and reliance into the next few decades.
2. Assessed the consequences to Air Force operations if these commercial systems become unavailable, partially available, or degraded.
3. Determined the availability issues for the applicable commercial systems. The study considered:
  - a. Commercial practices, user priorities, multi-national ownership, etc., and

- b. Vulnerability of all aspects of the systems (space and ground) to deliberate hostile actions.
4. The study proposed (cost-effective) options or strategies for managing the availability problems cited above.
  - a. It examined possible changes to Air Force and other government equipment and operations, including procedures and training.
  - b. It proposed changes to a commercial system that would assess incentives and cost-sharing possibilities.
  - c. It considered the real time problems of detection and identification of attack or degradation of availability, and possible response options.

The study built on the recent DSB and SAB studies that addressed the survivability of space systems. It also recognized that the Air Force's use of space assets is often indirect, through organizations such as DISA and the NRO, and these systems were included in the study.

The results of the study were briefed to the Secretary and Chief of Staff of the Air Force in the Pentagon on 26 September 2001. The report is currently undergoing an Air Staff review and will be available for distribution as an FOUO/Schedule D document in March 2002.

**Migration of Databases of Command and Control** (Chaired by Dr. James Hendler; Executive Officer, Maj John Pernot)

#### **Background**

The rapid evolution to modern information systems creates a very major problem in the continuing viability of the legacy databases. The SAB just completed a major summer study on Command and Control, and the successful implementation is going to require that the many databases, which are used throughout the C2 enterprise, can be successfully migrated to emerging and future systems.

#### **Charter**

The study reviewed databases that are involved in command and control systems and processes, and made an assessment of the state of their

accessibility by the emerging systems associated with Theater Battle Management Core Systems (TBMCS). The study considered database issues such as standards, management practices, etc., as appropriate, and it accomplished the following:

- Made recommendations on the strategy, processes, and technical detail to assure the continuing viability of the data contained in the legacy databases.
- Made recommendations on the further migration of the databases to a Joint Battlespace InfoSphere environment over the longer term.

The results of the study were briefed to the Secretary and Chief of Staff of the Air Force in the Pentagon on 18 December 2001.

#### **FY 02 Studies**

**Predictive Battlespace Awareness to Improve Military Effectiveness** (Chaired by Maj Gen (Ret) George Harrison; Executive Officer, Capt Kent Broome).

#### **Background**

Better utilization of information for more effective combat operations has been an ongoing theme in the Air Force for the last several years. There is a real need for a forward looking analysis of making better use of what we have as advance preparation for conflict, and in predictive analysis that allows effective management of information collection and flow up to and including real time sensor management in conflict.

Predictive Battlespace Awareness (PBA) has been defined by Gen Jumper to include baseline reconnaissance, terrain delimitation, focused surveillance, catalogued analysis of movement patterns, knowledge of enemy tactics, intentions, and disposition, and course-of-action analysis. Several SAB studies over the last few years have defined approaches to managing information, and the importance of coordinating and fusing data. In 1999 the SAB defined an approach called the Joint Battlespace InfoSphere (JBI), to collect and provide information and situation awareness to warfighters. The 2001 Summer Study on Sensors for Difficult Targets highlighted the need to make better use of available information.



## **Charter**

The goal of the 2002 SAB Summer Study is to define a process and an approach and technology needed to enable joint Predictive Battlespace Awareness. The study will build on previous SAB studies, including the JBI study, the C2 study and the Sensors study. The study will not address specific sensors, logistics support, or acquisition. The study will recommend:

- Improvements to the Air Force PBA process and architecture in a joint environment.
- The overall process for gathering, processing, and cataloging information – ultimately for the JBI – including interactions between the AF and other information gatherers.
- The roles and responsibilities defined in the PBA process, including sensor taskers, data processors, information disseminators, course of action developers, analysts, and decision makers.
- The state of technology for developing required tools, including course of action development and assessment tools.
- An affordable program to provide PBA in the near term, building toward the JBI in the future.
- An assessment of the capabilities that would be available over time as the PBA architecture is implemented.

The study will be briefed to the Secretary and Chief of Staff of the Air Force by August 2002; the report will be published in December 2002.

**Immediate Attack of Mobile and Time Critical Targets Deep In Hostile Territory** (Chaired by Mr. Theodore Wong; Executive Officer, Maj Timothy Kelly).

## **Background**

There are an increasing number of targets deep (as much as hundreds of miles) in enemy territory that move and/or hide. Intelligence to provide the real-time location is a major part of the problem. But even supposing there were a system or systems to provide real-time target ID and location, the capability to receive such a communication and then attack rapidly enough to destroy many of these targets is deficient.

## **Charter**

The goal of this study is to provide recommendations to the Air Force that will improve the capability of attacking and defeating time critical targets deep in enemy territory, focusing primarily on the technical capabilities needed to successfully accomplish this mission. The study should first consider what can be done with current assets (including nearly current assets such as the F-22), and then consider cost constrained future possibilities.

The study will address:

- concepts of operations
- ISR needs in terms of time scale and precision
- possible weapon systems and weapons to accomplish the mission
- BDA
- communication capabilities to support the above

The study will be briefed to the Secretary and Chief of Staff of the Air Force by August 2002; the report will be published in December 2002.

## **Ongoing Review Panels and Projects**

**Review of Air Force S&T Efforts** (Chaired by Mr. Jeff Erickson, Prof. Eugene Spafford, Dr. Elsa Reichmanis, Mrs. Natalie Crawford and Prof. Mark Lewis) From October to December 2001, the SAB completed the reviews of the Air Force Research Laboratory. The five directorates reviewed this year included the Human Effectiveness Directorate, chaired by Mr. Jeff Erickson; Information Directorate, chaired by Prof. Gene Spafford; Materials and Manufacturing Directorate, chaired by Dr. Elsa Reichmanis; Munitions Directorate, chaired by Mrs. Natalie Crawford; and Air Vehicles Directorate, chaired by Prof. Mark Lewis. The results of these reviews will be briefed to the commander of AFRL on 28 March at Wright Patterson AFB.

**Task Force on the Threat of Asymmetric Attack** (Chaired by VADM David Frost, USN (Ret.))

## **Background**

Concerns about the asymmetric threat to our

nation are no longer theoretical and are much more urgent since the incidents of 11 September 2001. There is every reason to believe that there will be other attacks in the future. It is important to bring some independent perspective to bear on what the future may hold to help the leadership of the Air Force and the nation to prepare.

The Secretary and the Chief of Staff of the Air Force have asked the Air Force Scientific Advisory Board to create a standing Task Force on the Threat of Asymmetric Attack. The Task Force will be convened to provide top level advice and insight on specific taskings from the Secretary and the Chief, and not to do in-depth study or analysis.

#### **First Tasking**

The Task Force will identify and discuss possible threats of asymmetric attacks against the nation, generally focusing on those which will include or ultimately will involve the Air Force, but not excluding anything that the leaders of the Air Force can bring to the attention of the nation. This work is intended to be a brief, focused, top-level look at this problem by a small number of people rather than an extensive or in-depth analysis. The Task Force will concentrate on a descriptive analysis of possibilities rather than on solutions. It is understood that the work will not be comprehensive, but developing a few key ideas and insights is the goal.

The Task Force briefed the Secretary and Chief of Staff of the Air Force on 17 December 2001.

For more information on AF/SB studies and terms of reference, visit <http://www.sab.hq.af.mil/>.

## **DIA Science and Technology Advisory Board**

**Dr. Michael Wartell – Chairman**

**Ms. Victoria Prescott – Executive Secretary**

DIA is changing the Science and Technology Advisory Board in favor of a smaller, more broad-based Advisory Board. The Board is being re-configured to be more focused on our current and future mission needs. The new membership on the Advisory Board will include expertise in regional issues, social sciences, technology, human resources, and management. The Board will continue its representation on the Senior Steering Groups for the four defense intelligence priority thrusts, which are Attack the Database Problem, Intelligence Integration/Interoperability with the Common Operating Picture, Shaping to Meet the Asymmetric Threat, and Revitalizing and Reshaping the Workforce. Additional topics for the Advisory Board are currently being evaluated.

## ***Defense Science Board Members and Ex Officio***

### **CHAIRMAN**

Dr. William Schneider, Jr. Int'l Planning Services, Inc.

### **VICE CHAIRMAN**

Mr. Vincent Vitto, Charles Stark Draper Laboratory

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Mr. William P. **Delaney**, MIT Lincoln Laboratory

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Dr. John S. Foster, Jr., Private Consultant

Dr. Michael S. Frankel, SRI International

Dr. Theodore S. Gold, Institute for Defense Analyses

Dr. William R. Graham, National Security Research, Inc.

GEN William **Hartzog**, USA (Ret.), Burdeshaw Associates, Ltd.

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Dr. Joshua Lederberg, The Rockefeller University Mr.

V. Larry Lynn, Private Consultant

Mr. Peter A. Marino, Private Consultant

Dr. Joseph Markowitz, Private Consultant

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ADM Donald L. Pilling, USN (Ret.), Logistics

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

Dr. George M. Whitesides, Harvard University

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RADM Wayne E. Meyer, USN (Ret.), BMD Advisory Committee

Dr. Michael Wartell, DIA S&T Advisory Board

Ms. Kathy Hegmann, Naval Research Advisory Comm

## **Distribution**

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Under Secretary of Defense (Policy)  
Under Secretary of Defense (Comptroller)/CFO  
Under Secretary of Defense (Personnel & Readiness)  
Vice Chairman, JCS  
Army Chief of Staff  
Air Force Chief of Staff  
Chief of Naval Operations  
Commandant of the Marine Corps  
Principal Deputy Under Secretary of Defense (AT&L)  
Director, Defense Research & Engineering  
Assistant Secretary of Defense/Public Affairs  
Under Secretary of the Army  
Under Secretary of the Navy  
Under Secretary of the Air Force  
Army Vice Chief of Staff  
Air Force Vice Chief of Staff  
Vice Chief of Naval Operations  
Assistant Secretary of Navy (RD&A)  
Assistant Secretary of Army (ALT)  
Assistant Secretary of Air Force (Acquisition)  
Director, MDA  
Director, DARPA  
Director, DTRA  
Army Science Board  
Naval Research Advisory Committee  
Air Force Scientific Advisory Board  
CNO Executive Panel  
DIA Science & Technology Advisory Board  
Chief Technology Officer, Navy  
TRAC