



# VIRGINIA MOUNTAIN SECTION NEWSLETTER

IEEE Region 3, Council 09, Section 65

April 2003

April 17, Clarion Hotel Roanoke Airport  
**An Overview of DARPA and  
the Information Exploitation Office**  
**Dr. John S. Bay**  
**Program Manager, DARPA**

### Abstract

The Defense Advanced Research Projects Agency (DARPA) is the Defense Department's primary advanced research agency. DARPA's official mission is to maintain the technological superiority of the U.S. military and prevent technological surprise from harming our national security by sponsoring revolutionary, high-payoff research that bridges the gap between fundamental discoveries and their military use. **The Information Exploitation Office (IXO) in DARPA was created in 2001 in order to develop sensor and information system technology and systems with application to battlespace awareness, targeting, command and control, and the supporting infrastructure required to address land-based threats in a dynamic, closed-loop process.**

In this talk, an overview of the structure and operation of DARPA will be presented including the technology thrusts of its eight offices. Also, a snapshot of current IXO programs and directions in which future programs may emerge will be presented.

### Speaker

John Bay received his Ph.D. degree from The Ohio State University in 1988 and taught Electrical and Computer Engineering from 1989 until 1999 at Virginia Tech. From 2000 until April of 2001 he was an Engineering Fellow for Strategic Systems at the Raytheon Company in Falls Church, Virginia. In April 2001 he became a Program Manager with the Defense Advanced Research Projects Agency, Information Exploitation Office, where he manages research programs in control systems, unmanned aerial vehicles, and embedded systems. He is a Senior Member of the IEEE, a former IEEE Computer Society Distinguished Visitor, a former Associate Editor of IEEE Control Systems Magazine, and a former IEEE VMS Executive Committee member.

### Directions to Clarion Hotel Roanoke Airport

2727 Ferndale Drive NW  
1581 Exit 3 Hershberger Rd West  
1st Rt. onto Ordway Drive,  
¼ mile, Rt. into Parking Lot.

Date: Thursday April 17, 2003

### Time:

Social: 6:30 PM

Dinner: 7:00 PM

Talk: 8:00 PM

Cost: Member or guest \$ 15.00  
Student \$ 8.00

Reserve by 5 PM

**Monday** April 14

**Mark Shepard (540) 387-8710**

[mshepard@ieee.org](mailto:mshepard@ieee.org)

Please indicate number of attendees.

### IECON 2003

The 29<sup>th</sup> annual conference of the IEEE Industrial Electronics Society will be held at the Hotel Roanoke November 2-6, 2003. Deadline for submission of papers is April 30. Please see the IECON 2003 website for more information

<http://iecon03.crts.vt.edu>

### Visit the VMS WEB page:

<http://www.ewh.ieee.org/r3/virginia-mountain>

**Webmaster: Bill Onesty**

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## MEMBERSHIP

### IEEE 2002 YEAR-END NUMBERS

The IEEE ended 2002 with

- more than 382,000 members in approximately 150 countries, almost 38 percent of whom are from outside the United States.
- more than 70,000 student members.
- more than 32,000 society affiliates.
- 298 sections.
- more than 1,300 chapters.
- over 1,150 student branches in 79 countries.
- over 300 student branch chapters.
- 37 societies and 4 technical councils.

IEEE Membership totaled 386,977 in January with growth at 1.5 percent.

In February two new sections were approved, making an even 300.

At the end of February IEEE Operations Center ran the "Terminator" program where they drop all members who have not paid their current dues and Life members who failed to return the notification that they wished to be retained.

The Virginia Mountains Section has 359 higher grade members, same as 2002, and 344 Student Members, a gain of 61 over 2002. As your Membership Development Chair I will do what I can, but I need the help of each one of you to ask a colleague to join the IEEE. You know what your benefits are, therefore, you are the best salesman or saleswoman. One of the benefits for me is having an IEEE email alias. **The IEEE Email Alias Service protected IEEE members from approximately 332,000 viruses in 2002.** Last year, 16,219 new IEEE email aliases were created, bringing the total to 88,858. IEEE members can sign up for this free service at <http://elecomm.ieee.org/>.

Dan Jackson, Membership Development Chair, [d.jackson@ieee.org](mailto:d.jackson@ieee.org)

## AWARDS

### IEEE-SA CALL FOR NOMINATIONS

The IEEE-Standards Association is seeking nominations for two separate awards; one for individuals and one for organizations.

The IEEE-SA is seeking nominations for the IEEE-SA 2003 International Award. This award is given to an IEEE-SA individual member who has made extraordinary contributions to the advancement of the international goals of the IEEE-SA. Recognition of the IEEE-SA as a developer of standards for world-wide implementation can be sought in many ways. Inclusion of international factors in a standard, successively promoting IEEE standards in an international forum, establishing closer relationships with international standards bodies are but examples of the efforts being made on behalf of the IEEE-SA. The International Award is to recognize an IEEE-SA member who whatever the venue, has excelled in this endeavor. Please think about IEEE Volunteers from your Section who have contributed to international standards. Only you know who among your colleagues has contributed in this area.

The IEEE-Standards Association is also seeking nominations for the IEEE-SA 2003 Corporate Award. This award is presented to an IEEE-SA member organization for providing outstanding leadership and contributions to the IEEE-SA. IEEE-SA programs and activities are responsive to industry needs, and member organizations provide necessary guidance and direction to assure that current market and economic forces are appropriately recognized in the standards process. It is the purpose of this award to give due recognition to the Corporate Member who in the past year has lead the way in this endeavor. Only you know if your employer falls into this category.

Both of these award which consist of a crystal sculpture and certificate, will be presented at the IEEE-SA Awards Ceremony on Sunday, 7 December 2003

at the Grand Hyatt New York on Park Avenue at Grand Central in New York City. The nomination deadline is 15 May 2003. To obtain information and nomination form, visit the IEEE-SA International web site

<http://standards.ieee.org/sa/aw/intlaward.html> or contact Theresa Steenweg at 732-562-3836 or by email at [t.steenweg@ieee.org](mailto:t.steenweg@ieee.org).

Jamaica will be receiving the RAB Section Membership Growth Award for Region 3, and Old Dominion will receive the Student Branch Membership Growth Award. Congratulations to both groups!

### Educational Activities Board Seeks Awards Nominations

Submitted Via New Electronic Process - Deadline - 30 April 2003

The IEEE Educational Activities Board (EAB) has created an electronic awards nomination process and is currently accepting nominations for the following: IEEE EAB

- Meritorious Achievement Award in Accreditation Activities
- Meritorious Achievement Award in Continuing Education
- Major Educational Innovation Award
- Pre-College Educator Award
- Meritorious Service Citation
- Employer Professional Development Award
- Sections Professional Development Award (New for 2003)

Award descriptions, nomination instructions, applicable honorarium details and nomination forms are available at

<http://www.ieee.org/organizations/eab/arc/awards/callnominations.htm>.

Nominations are due by 30 April. For more information, contact Rae Toscano, IEEE Educational Activities, at [r.toscano@ieee.org](mailto:r.toscano@ieee.org).

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Dan Jackson, Awards Chair, [d.jackson@ieee.org](mailto:d.jackson@ieee.org)

DATE	SPEAKER/TOPIC	MEETING PLACE
September 19	<b>Brian Lindholm</b> Six Sigma Methods at General Electric	Clarion Hotel Roanoke
October 17	<b>Daniel Stilwell</b> Enabling Technologies for Platoons of Cooperating Autonomous Underwater Vehicles	Best Western, Blacksburg
November 21	<b>David Stocker</b> LIDAR Technology for Fully Automatic Crane Operation	Clarion Hotel Roanoke
January 16 (postponed to January 30 owing to weather)	<b>Undergraduate Student Paper Contest</b>	Clarion Hotel Roanoke
February 20	<b>Spouses' Night, 2003</b> <b>Dave &amp; Gail Geer</b> <b>China: Expectation &amp; Experience</b>	Clarion Hotel Roanoke
March 20	<b>Kenneth Ferris</b> A Perspective on Technology in the New Century Region	Clarion Hotel Roanoke
April 17	<b>John Bay</b> An Overview of DARPA and the Information Exploitation Office.	Clarion Hotel Roanoke
May 15	<b>Spring Picnic and Tour of VMI Observatory</b>	McKethan Park, Lexington, VA

### IEEE Virginia Mountain Section

#### VMS OFFICERS

**Chairman: Mark Shepard**  
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**Education (Open)**

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#### NEWSLETTER

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Contact Newsletter Editor to be  
added to VMS listserv  
**Anyone may submit material for the  
Newsletter; Deadline:**  
**Monday following each meeting**