

Attendees

John Brubaker, Lee Beach, Russell DeYoung, Jay Diedzic, Doug Dwoyer, Chris Edwards, David Forrest, Carl Friedrichs, Jim Golden, Ed Gootzait, Carl Hershner, Virginia Jones, Steve Keeter, Jane Lopez, Mike McGinnis, Dennis Manos, Mike McBeth, Doug Meredith, Paul Panetta, Susan Patterson, John van Rosendale, Jim Schultz, Carter Scott, Leonard Sledge, Al Smith, Greg Stringfield, Mike Unger, Lyle Varnell, John Wells.

Purpose

The purpose of this meeting was to cover:

- **VIMS Updates** (John Wells)
- **VIMS Finance Forum** (Lyle Varnell)
- **Algae Energy Overview** (Jay Diedzic)
- **Center for Autonomous Vehicle Interoperability Advanced Research (CAVIAR) Report** (Susan Patterson)
- **PFI Grant Proposal** (Doug Dwoyer)

Note: Susan Patterson's presentation has been posted at:

<https://web.wm.edu/economicdevelopment/VIMSIndustryPartnership.php>

Agenda

John Wells chaired the meeting and Jim Golden facilitated the agenda.

ANNOUNCEMENTS:

2009 EVENTS

- **February 17.** Sensor Science & Technology Forum
- **February 22.** Exploring PFI Grant Proposal (Partnership members to receive invitations)
- **March 12.** VIMS Finance Forum
- **Mid-April.** VIMS Buildings Dedication (Partnership members to receive invitations)

PRESENTATIONS:

Lyle Varnell. (VIMS Finance Forum)

Lyle and **Bill Bean** have organized this forum that will include outside speakers to discuss:

- How to succeed with Small Business Innovative Research Program (SBIRs) and Broad Area Announcement (BAAs)
- How to build stronger industry relationships
- How to produce more effective searches by building stronger "key words"

This will be a morning session followed by a box lunch for attendees. **Jane Lopez** offered her support again in packaging these proposals.

John Wells. (VIMS Updates)

Budget. John announced that even though the State budget cuts for higher education are on the order of **12- 15%**, the Federal Stimulus Plan will include **\$3B** for scientific agencies, such as NASA and **\$800 million** for NOAA, thereby potentially offsetting some of the State's shortfall.

VIMS Initiatives. VIMS has submitted three federal initiative requests (trawl survey, shark survey, harmful algal blooms) totaling over **\$3 million** for research support related to the Chesapeake Bay.

NOAA North Atlantic Regional Cooperative Institute Proposal. VIMS is responding to this proposal that covers **ecosystem monitoring** emphasizing research, development, technology transfer and training. Five other university partners (Maryland, New Hampshire, Rhode Island, Stony Brook and Hampton) are collaborating with VIMS. Funding would be **\$35 million** a year for five years divided among the partners. Areas would include modeling, fisheries, ecosystems, and resource management.

Agenda, cont.

PRESENTATIONS:

Jay Diedzic. (Algae Energy Overview)

Under the leadership of VIMS, William & Mary (W&M) and the W&M Research Institute (WMRI), research began nine months ago on the study of algae as an alternative energy source. One interesting technology under investigation is the Algal Turf Scrubber (ATS[®]) method created by **Walter Adey**, a VIMS adjunct professor. ATS removes nutrient pollution from waterways and converts it into algae usable as feedstock for bio-fuels. A pilot project is currently underway along the Susquehanna River.

Jay mentioned particular interest in technologies using wild algae and the potential for these systems to be located in the water rather than on land. Instead of focusing on traditional college funding sources, this project has concentrated on securing support via large energy related corporations. Potential research partners for VIMS, W&M and WMRI who have participated in early discussions include: Statoil Hydro, Exelon Corp, Boeing, Smithsonian Institution, University of Arkansas, Delta-T Corp, Oak Ridge National Lab, Chesapeake Research Consortium, US Department of Energy, Hydromentia, Western Michigan University, Princeton University, University of Maryland, and PCCI, Inc.

Note: At our next meeting **Emmett Duffy** and **Liz Canuel** at VIMS will discuss some of the science involved in these potential programs.

Susan Patterson (Director of CAVIAR, an NIA Initiative)

Susan discussed CAVIAR's potential as a partner with both academia and industry in the area of interoperable robotic and related sensors. She emphasized CAVIAR's interest in developing a test-bed that would provide a "multiple vehicle situational awareness and avoidance boundary" that could be used for research, testing and experimentation. She noted that robotics, used as a "data gathering" tool, could help universities to create additional research funding and participation in other business opportunities, if we can find the right incentives for professors to participate. CAVIAR has responded to a DARPA BAA regarding submersible aircraft. CAVIAR is working with **Mark Patterson** of the ASL (VIMS Autonomous Systems Laboratory) on this proposal. Additionally, **Dennis Manos** mentioned that W&M is an affiliated partner in NIA and that **Mark Hinders** is the W&M representative.

OPEN DISCUSSION:

Mike McGinnis. Mike, Executive Director of the Virginia Modeling Analysis and Simulation Center (VMASC), noted that recent actions have included new contracts with Joint Forces Command, more work on transportation issues such as traffic and evacuation patterns, and increased work on education and training - especially medical training.

Doug Dwoyer.

- *Exploring the PFI Grant Proposal.* EVMS has the lead on this proposal with support from the Hampton Roads Research Partnership and W&M/VIMS. This proposal is focused on stimulating innovation in bioscience in Hampton Roads. The grant request is for **\$300,000 for two years**. Doug will be visiting VIMS on February 27 to discuss details.
- *Sensors in Bioscience – from Research to Products*, sponsored by Sensor Science & Technology Forum (SS&TF). Tuesday, **February 17**, 7:30am to 12:30pm at VMASC. (<http://www.hrtc.org/en/cev/277>). **Howard Kator, VIMS** will be on the panel.

Paul Panetta. Paul is working on a DoD grant proposal with **Carl Friedrichs** involving sea bed acoustic research and improving sensor capabilities.

Mike Unger. Mike discussed recent biosensor developments, including the following: publication of an article by a graduate assistant; work on sensors in the Elizabeth River to monitor PH concentrations; scheduled work in June to monitor a dredging event in the Elizabeth River; work with the U.S. Fish and Wildlife Service to investigate a creosote contamination site; a NOAA oil spill workshop in March to review new technologies and develop research priorities; and testing of two new antibodies for two-ring compounds.

Agenda, cont.

OPEN DISCUSSION:

Chris Edwards. NASA is doing research focused on remote sensing and coastal mapping, to include high precision measurement of carbon dioxide and ground winds. He introduced **Russell DeYoung**, senior research scientist in the atmospheric science division. Chris noted the potential for greater collaboration with VIMS concerning the air-sea interface, and he will discuss potential applications at our next meeting.

Pew Environmental Trust Program. This program on climate change is aimed at political leaders on **March 20, 2009** at Mt. Vernon. The theme is adaptation rather than avoidance. **Roger Mann, VIMS** and **Dennis Bushnell, Langley** will be speakers.

New Web Site Launch (www.hrrp.org). The site includes information about the HRRP technology clusters and it has space for descriptions of research areas. **Jim Schultz** will ask professors to contribute articles for this site.

CLOSING COMMENTS:

John Wells noted that **Andrews Hall** (75,000 SF) and the **Seawater Lab** (45,000 SF) will be dedicated this spring and that the new concrete pier is nearing completion. He thanked the group for their participation and the excellent discussion.

Next Meeting

Friday, **May 22.** VIMS Director's Conference Room, Watermen's Hall. 10:00am – Noon.

The draft agenda includes the following topics: Algal research at VIMS (**Emmett Duffy** and **Liz Canuel**); a report concerning the VIMS Autonomous Systems Laboratory (**Mark Patterson**); an update on SAIS wind-power projects (**Neil Rondorf**); and an overview of potential VIMS-NASA collaborations (**Chris Edwards**).
