

VIMS Industry Partnership Meeting Notes – May 4, 2007
Director's Conference Room, Watermen's Hall, VIMS, 10 a.m. until noon

Present:

VIMS: John Wells (Dean and Director), John Brubaker (Physical Sciences), David Forrest (Physical Sciences), Carl Friedrichs (Physical Sciences), Courtney Harris (Physical Sciences), Steve Kaattari (Environment and Aquatic Animal Health), Mark Patterson (Biological Sciences), Mike Unger (Environment and Aquatic Animal Health).
W&M Main Campus: Bill Bean (Technology and Business Center), Jim Golden (Economic Development), Leonard Sledge (Economic Development), John van Rosendale (Computational Science).
Industry: Eric Weisel (Werner Anderson), Tony Rennie (Blacksmith), Mark Huggard (Luna Innovation), Susan Patterson (Fern Group).
Government/Education/Non-Profit: Mike McGinnis (Executive Director, VMASC).

1. Recent activities of the Autonomous Systems Laboratory – (Mark Patterson)
 - Northrup Grumman has initiated a test program for a large AUV (Nemo II)
 - The patent for neural network classification technology should issue in three months
 - ASL has received a \$.5 million grant from NOAA's Office of Ocean Exploration (OE). The VIMS AUV (Fetch 1 – a gift from Prizm) will be used to map the ocean floor around Bonaire Island just off the coast of Venezuela and collect other data, including dissolved oxygen levels.
 - ASL has \$1.8 million in other proposals under consideration and it is also seeking private funding
 - ASL will have new lab space in Andrews Hall in 2007 .
 - November 11-16 ASL will be doing research in conjunction with the underwater habitat Aquarius (www.uncw.edu/aquarius) with Fetch 1
 - The ASL is considering development of a new series of AUVs using new cell phone technologies

2. Modeling and Simulation at VMASC
 - Mike McGinnis, Executive Director of the Virginia Modeling Analysis and Simulation Center (VMASC - <http://www.vmasc.odu.edu/>), provided an overview of VMASC capabilities and plans.
 - VMASC was established in 1997 at ODU by the Commonwealth. It currently does about \$10-12 million per year in research. The Center has 17 tenure track faculty distributed across various departments, including 8 in engineering.
 - VMASC will be moving to a new facility in the new MAST research center. The MAST Center will straddle the Suffolk-Portsmouth line. The VMASC building will be in Suffolk. They hope to move in the September-October 2007 time-frame.

- The overwhelming majority of VMASC's research has been funded by various DOD organizations, particularly the Joint Forces Command, but they are working to diversify their research. Primary areas of interest include transportation, homeland security, military, serious gaming, education, and medical applications.
 - VMASC is very active facilitating various academic and business conferences, and is helping to organize the MODSIM conference on September 11-13 in Virginia Beach
 - Discussion of VMASC/ODU and VIMS collaboration potential, including the ongoing proposal to the Department of Homeland Security for a Center of Excellence for the Study of Natural Disasters, Coastal Infrastructure and Emergency Management (Mike McGinnis, John Wells, Jim Golden, et al.) – 30 minutes
3. Potential VMASC-VIMS-Industry Collaboration (Jim Golden, Mike McGinnis, John Wells, General Discussion)
- Since the beginning of 2007 VMASC and VIMS have been involved in a number of discussions, facilitated by the Hampton Roads Research Partnership, concerning potential collaboration in the areas of natural disasters and security issues in the maritime domain. The most likely connections are between VIMS/W&M strengths in sensors, observation systems and modeling, and VMASC strengths in modeling and simulation to support decision analysis.
 - VMASC/ODU took a lead position in applying for a Department of Homeland Security Center of Excellence in Natural Disasters, Coastal Infrastructure, and Emergency Management, which will be funded at \$3 million per year for six years. VIMS has a major partnership position in the proposal and would have the lead in the "natural disasters" area. The partners submitted a white paper to DHS in February and they have been working on a full proposal since then.
 - Following the VIMS-Industry Partnership meeting, VMASC learned that DHS had reviewed the white paper and was not inviting a full proposal. The partners have decided not to submit a full proposal, but both VMASC and VIMS are interested in exploring future collaborations along the lines laid out in the proposal.
4. Maritime Simulation Laboratory (Eric Weisel, General Discussion)
- Eric Weisel expressed his interest in expanding modeling and simulation activity related to marine science in Gloucester County.

- His company, Werner Anderson, has been exploring the possibility of developing a laboratory to provide resources that would support modeling and simulation and provide access to sophisticated packages that individual companies or VIMS might not be able to purchase.
- He stressed that the goal would not be to compete with the work done at VIMS, but to provide resources to supplement and complement VIMS research.
- The group discussed potential collaboration on agent-based models that might simulate the use of swarms of AUVs. Mark Patterson expressed an interest in models that could teach robots how to save energy by taking advantage of currents. The group notes that other models could simulate missions and reduce the cost of actual missions.
- Discussions will continue among VIMS, VMASC and Werner Anderson.

5. Closing Comments – John Wells adjourned the meeting at 12:10.

Next Meeting: July 20, 10 a.m. to noon. Potential topic – data integration.