UPDATE ON CHSD OBSERVING SYSTEM EFFORTS

Carl Friedrichs, Director of VIMS Coastal Hydrodynamics & Sediment Dynamics Lab
UPDATE ON CHSD OBSERVING SYSTEM EFFORTS

1. Projects & Proposals
2. Industry Partnerships
3. MUDBED Project
History of CHSD Observing System Projects:

• 2003-2004 $250K USCG R&D Center “Prototype of a New Peer Into the Waterways Information System”

• 2004-2005 $300K Commonwealth of VA “Waterborne Hazards Initiative” (with EAAH)

• 2004-2006 $110K NOAA “CBOS Cooperative Expansion & Integration Demonstration”

• 2005-2007 $2.7M ONR Mark-Up “Detection and Prediction of Hazards in Ports…” (with EAAH, CBNERR)

• 2006-2008 $1.9M NSF “MUDBED” (with Biology Dept)
Friedrichs Attempts at Continued Observing System Funding:

- Feb 2006 Proposal with Wells via W&M to Warner’s Office for continuation of ONR Mark-Up in FY07.
- Dec 2006 Proposal with INCOGEN to NSF SBIR program for continued informatics development.
- Jan 2007 Pre-proposal with Tellus & INCOGEN to NOAA for continued informatics development.
- Feb 2007 Pre-proposal with VMASC to DHS for Center for the Study of Natural Disasters.
- Sep 2007 Supplement request to NSF for continuation of MUDBED project.
- Dec 2007 Pre-proposal with Chesapeake Research Consortium to NOAA for CBOS expansion.
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- Sep 2007 Supplement request to NSF for continuation of MUDBED project. **Funded $390K.**
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Industrial Partnerships Within CHSD Observing System Efforts: SAIC (ONR Mark-Up)

- 6-m NOAA NOMAD buoy deployed Jan 2006 in the Chesapeake near mouth of the York River (in collaboration with CBNERR).

- High-bandwidth fiber optic cable cable installed to link buoy to shore.

- Complex and diverse sensor suites can be integrated on a common power grid and telemetry scheme.

- Real-time waves and currents continually since early 2006.
Industrial Partnerships Within CHSD
Observing System Efforts: INCOGEN (ONR Mark-Up)

CHSD-INCOGEN
Observing System web portal since June 2006:
chsd.vims.edu/realtime
CHSD site is part of VIMS-wide VECOS:
www.vecos.org
Industial Partnerships Within CHSD Observing System Efforts: IWT and Franktronics (NSF MUDBED)

Direct RS232 serial cables to small buoy with low power serial wireless transmitters.

Local wireless transmission to high power modem on stable platform.

High power, longer range RF transmission back to shore ethernet network. Conversion back to serial at host PC anywhere on internet. PC pushes data to web server.
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MUDBED WormCam – Bob Diaz, VIMS Biology Department
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Coastal Hydrodynamics & Sediment Dynamics