Sensors.gov Conference and Exposition

The Sensors.gov Conference and Exposition was held in Hampton, Virginia on 12/06-08/05. The event focused on the next generation of sensor-dependent systems and analytical processes. There were sessions on nano-sensors, chemical and explosives monitoring, environmental monitoring, health monitoring, homeland security applications, RFID, transportation applications and more. Copies of the presentations are to shortly be mounted at www.sensorsgov.com.

Some of the keynote and plenary presentations were extraordinarily insightful. For example, Dennis Bushnell, Chief Scientist of NASA's Langley Research Center, wove the history and future of sensors and monitoring into the history and future of science & technology, which in turn, he wove into a vision of future environmental, social and economic change. Among many other predictions, he sees a major threat in methane hydrate decomposition. He sees a variety of nano-sensors and monitors. RFID will become ubiquitous. Warfare will rapidly be done with autonomous robots. There is an "emerging global sensor grid" that basically will instrument the entire planet.

John Doesburg, Director, Homeland Security Programs at the Oak Ridge National Laboratory, presented the new UT/ORNL Center for Homeland Security and Anti-polliferation. It seeks to clearly define the various HS requirements from the various state, local and Federal perspectives and then to find short term solutions. He pointed to a need for teaming to detect genetically-engineered threats; for a need for integrated sensor nets to provide actionable information to first responders; for much faster mass spectral analysis of trace explosives; and more. He noted that "land scanning" technologies are now in use for population tracking.

Jamie Downs, Coastal Regional Medical Examiner for the Georgia Bureau of Investigation gave a riveting presentation on the state of crime forensics. He emphasized the need for advanced, cost-effective, non-invasive, non-destructive sensors, monitors and analytical equipment tailored for forensics applications. He clearly showed the strong needs and the potential benefits, convincing that the needs are more pronounced now in the age of terrorism. We invited Jamie to participate in the 2006 FLC MAR annual meeting, and expressed interest and intention. It seems likely that technologies from numerous Federal labs might be productively brought to bear on this field.

Bill Chard discussed the NASA sensor intellectual property portfolio. He said there are 1359 sensor technologies. Of these, 76 are licensed and 185 more are available for licensing. NASA has 306 development partners in the sensor field.