

## Nanotechnology Advisory Committee Meeting Summary, September 14, 2005

The Nanotechnology Advisory Committee held its third meeting on September 14, 2005 in House Room D of the General Assembly Building at 1:00 p.m. Chairman Delegate Purkey called the meeting to order and Bon Stolle introduced Pattie Cook for a presentation on the FIRST (For Inspiration and Recognition of Science and Technology) Robotics Competition.

FIRST is an international non-profit organization started by inventor Dean Kamen. The competition encourages high school students to pursue science and engineering degrees by offering them an opportunity to connect science and math with real world applications. Approximately 25,000 students compete in 32 regional competitions across the world. One of the regional competitions is located in Richmond. FIRST alumni are two times more likely to major in science or math and three times more likely to major in engineering than other high school students.

Teams that wish to compete in FIRST must seek private sponsorship and do not receive academic credit for the year-long process of constructing a robot. Pattie indicated that more incentives were needed for businesses to partner with teams and more incentives for teachers and students to participate. In many instances, teachers are not compensated for their extra work with a team. In many ways FIRST is similar to traditional sports sponsored by high schools and Pattie suggested it would be beneficial if they were funded and treated more like a typical high school sport.

Pattie next introduced Dave Blackberry of ODU. Dave expressed his concern that less than 2% of incoming college freshmen were calculus ready. He stated there need to be more catalysts, like FIRST, that will spark an interest in math and science at the high school level.

Pattie next introduced Charles Lowery from Halifax County. Halifax County first entered the FIRST competition four years ago and has had teams place 16<sup>th</sup>, 2<sup>nd</sup>, and 1<sup>st</sup>. Charles found that FIRST was more about teamwork, leadership, community involvement, and entrepreneurial skills than it was about winning and losing. He noticed a direct benefit to the lives of the students who competed.

Pattie next introduced Randy Dillard from Verizon and works with the Verizon Foundation. Randy wanted to express his praise for the FIRST competition and state how pleased he has been to sponsor teams.

Pattie next introduced Tom McCormick from Infineon. Tome stated that his company depended on a pipeline of qualified engineers and FIRST was an excellent way for young students to gain interest in engineering careers.

Pattie next introduced Erin Joseph, a freshman at VCU majoring in engineering and a past participant in FIRST. Erin gave the committee a first hand description of the event

and how she directly benefited from FIRST. Erin received one of many scholarships from FIRST to help pay for her college tuition.

Pattie concluded her presentation of FIRST and Bob Stolle provided a brief explanation as to why FIRST needs additional funding. Recent budget cuts at NASA Langley, a major sponsor of the regional competition in Richmond, have resulted in a limit on the number of teams that can participate. If the state could partner with FIRST, an additional site could be offered for the regional competition that would accommodate more teams. Over 2,000 students from Virginia currently participate in FIRST.

Dr. Michael Huff presented his proposal for a Nanotechnology Training Center. Dr. Huff's PowerPoint presentation is available on the JCOTS website.

The next Nanotechnology meeting was canceled to encourage members of the committee to attend the Accelerating Innovations conference sponsored by Senator Allen's office in Washington D.C. For the next meeting the committee was interested in hearing about funding alternatives, tax or credit legislation, and convertible bonds for start-ups. Delegate Purkey proposed the idea of having some form of state-wide recognition for high school students who excel in math and science. Please check the JCOTS [website](#) for future meeting dates, agendas, materials, and summaries.