

**REPORT OF THE VIRGINIA
SECRETARY OF TECHNOLOGY**

Nanotechnology Users Network Report

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



HOUSE DOCUMENT NO. 5

**COMMONWEALTH OF VIRGINIA
RICHMOND
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COMMONWEALTH of VIRGINIA

Office of the Governor

Aneesh P. Chopra
Secretary of Technology

January 3, 2008

Report for HJR 647

Dear Governor and Members of the General Assembly:

House Joint resolution 647 passed by the 2007 General Assembly directs my office in conjunction with the Virginia Research and Technology Advisory Commission (VRTAC) to develop recommendations to enable the networking of and access to nanotechnology instrumentation at commonwealth institutions of higher education, forming a Nanotechnology Users Network report.

I am pleased to submit the following summary of our progress in meeting the requests of this resolution.

In order to facilitate this discussion numerous materials were reviewed and discussions had on the status and direction of nanotechnology in Virginia including:

- Sept. 2003 - White paper, Virginia Nanomanufacturing Initiative, prepared for VRTAC
- May 2006 - Briefing to VRTAC by Prof. Robert Hull of UVA and Prof. Bill Reynolds of VT, Towards a Virginia Nanotechnology Users Network
- December 2006 - JCOTS 2006 Nanotechnology Advisory Committee report, Nanotechnology in Virginia
- March 2007 - VRTAC report, Collaborative Research and Development Strategies and Directions for the Commonwealth of Virginia
- December 2007 – JCOTS 2007 Nanotechnology Advisory Committee report, Whitepaper: Nanotechnology in Energy, Electronics, and Medicine

Discussions of these material as well as discussions with management officials, researchers and policy makers, all led to the consistently expressed need for a nanotechnology user's network.

The following are additional findings that are in need of further exploration and by way of this report I will be asking the chairs of VRTAC to review and take or recommend appropriate action.

Findings:

- A user's network can involve various elements, including inventorying instrumentation; establishing and publicizing policies, procedures, and fee structures for equipment use; acquiring new equipment; supporting new and/or existing equipment by funding technical staff to operate, maintain, and/or advance the science.
- A user's network can take advantage of existing facilities and capabilities, and does not require new brick and mortar.
- High-speed access makes it possible to use equipment remotely, or samples can be provided to another facility to process and report on.
- It is important to get buy-in of VRTAC's Vice Presidents of Research (VPR) to advance a users network.
- If VPR's support the concept of shared user facilities, Virginia Tech's Institute for Critical Technology and Applied Science (ICTAS) may be a model to review. It has highly specialized equipment in its recently opened Nanoscale Characterization and Fabrication Laboratory, and ICTAS's website identifies the equipment and a point of contact for those interested using equipment. Dr. Roop Mahajan, Director of ICTAS, might be willing to brief VRTAC on NCFL's process.
- VA's user's network could begin with key institutions inventorying equipment, developing policies, etc., and making equipment known. A role for an intermediary may exist; the intermediary would work with participating organizations and create a web-based application that identifies available equipment, policies, procedures, and fees, and arranges for use of shared equipment.

We will continue to explore recommendations and next steps associated with forming a Nanotechnology Users Network and report on such.

Sincerely,



Aneesh P. Chopra