NEWS RELEASE Governor Bob Taft

OHIO ORGANIZATIONS BRINGING REVOLUTIONARY IDEAS TO MARKET
Taft awards Third Frontier Wright Project grants

DAYTON (December 6, 2004)—Governor Bob Taft today praised several Ohio organizations for their efforts in turning research and technology into marketable products. Taft made the comments while at the University of Dayton where he awarded more than $10 million in Third Frontier Wright Project Awards to **nine** organizations throughout Ohio that will use the money to develop commercially viable technology.

"Ohio's future is in the hands of those who are able to take a great idea, develop it and produce a functional product that can be manufactured and sold throughout the world," said Taft. "I'm pleased to award $10 million in Third Frontier grants to those organizations that will unlock Ohio's potential and turn concepts into reality, ultimately creating new companies and more jobs for Ohio citizens."

The Wright Project grants help higher education institutions and non-profit research organizations commercialize innovative Ohio-based projects. Recipients must include an Ohio-based, for-profit company among its collaborators and must demonstrate the potential of a commercial application within five years.

Taft pointed to a previous Third Frontier-backed project as an example of the successful knowledge-to-product transfer that can occur through the collaborations the Wright Project awards foster. Earlier this year, t he University of Dayton Research Institute, a 2004 Wright Project award winner, licensed its carbon nano-fiber technology to Akron, Ohio-based NanoSperse. The company is now applying UDRI's technology to produce lighter, stronger and more durable polymers for use in the aerospace, electronics, equipment manufacturing and automotive industries.

While at the University of Dayton, Taft participated in an infrared imaging system product demonstration conducted by Andrew Sarangan of the university's Electro-Optic Graduate Program. The project, which is a 2005 Third Frontier Wright Project grant recipient, is developing long-wave infrared (LWIR) systems that will enable enhanced vision in dark, foggy or other unfavorable conditions. According to Sarangan, this technology has potential applications in a number of sectors and industries including aerospace, automotive, military and healthcare. The project's private partner, CMC Electronics, a manufacturer of mid-wave infrared (MWIR) cameras based in Cincinnati, is counting on the technology to expand its current product offerings.

"Currently, manufacturing long-wave infrared products is costly and difficult for private companies," said Sarangan. "The Third Frontier grant allows us to create the type of university-industry collaboration necessary to develop the prototype in a research setting where risks are not as high, and then transfer the technology to CMC Electronics when it has matured."

The 2005 Wright Project Award recipients include:

- **Business Technology Center** (Columbus, Franklin County) received more than $1.1 million to create the Platform Lab via the Third Frontier Network. A partnership between the Business

Technology Center and the Ohio Supercomputer Center, the Platform Lab will create four new access points on the Third Frontier Network to develop a wide area fiber channel test infrastructure to be known as the Ohio Fiberlab Network (OFLN). The OFLN will be available to academic institutions and business for development of bandwidth intensive distributed applications. Some usage examples are disaster recovery plant, IT security compliance requirements, and load testing of web-based applications before live deployment. Collaborators on this project include Ohio University, American Modern Insurance Co., Infinis, Garcia & Associates, Everest Technologies, Lorain Community College, RLX Technologies, Columbus State Community College, Mettler Toledo, BMW Financial Services, Sophisticated Systems Inc. and Team Dynam.

- **Development Research Corporation** (Kettering, Montgomery County) received more than $2.3 million to establish the *Radio Frequency Identification (RFID) Application and Education Center (REAC).* The REAC will serve as a source for RFID solutions for both end customers as well as suppliers. RFID tags, which consist of silicon chips and an antenna that can transmit data to a wireless receiver, could one day be used to track everything from soda cans to cereal boxes. Unlike bar codes, which need to be scanned manually and read individually, radio ID tags do not require line of sight for reading and hundreds of tags can be read per second. The project expects to achieve annual sales of $10 million and create 100 new jobs within 3 to 5 years. Collaborators on this project include Alien Technology Corp., Sinclair Community College, Miami Valley Venture Funds, Development Project Inc., NCIC Capital Fund and Dayton Area Chamber of Commerce.

- **Kent State University** (Kent, Portage County) received a grant of $100,000 for operations funding to continue its 2003 Wright Project of replacing conventional rigid LCD substrates with flexible plastic and replacing expensive batch manufacturing with more efficient and cost effective roll-to-roll processing. The new project, *Flexible Optical & Electronic Device Manufacturing Facility (FOEDMF): Ink Jet Printing*, will develop ink jet techniques to print optically- and electrically-active elements on flexible plastic substrates. Collaborators on this project in clued PolyDisplay Inc., Alpha Micron Inc., Hana Microdisplay Technologies Inc., Kent Displays Inc. and LXD Inc.

- **National Composite Center** (Kettering, Montgomery County) received a $100,000 operational funds grant to continue its 2003 Wright Project grant for its *Creating Affordable Large Scale Complex Composite Products* project. The project developed a large-scale performer to produce large fiber performs (parts over 100 feet long and 200 pounds) for aerospace and defense applications. NCC, using internal funds, also developed and intermediate sized manufacturing module and now seeks operational funding to optimize its use. The projected predicted $7 million in annual revenues the creation of 60 new jobs by 2006, and is on target. Collaborators on this project include WebCore Technologies Inc., Edison Materials Technology Center, Ashland Specialty Chemicals, Boeing, PolymerOhio Inc., Toray Carbon Fibers, University of Akron, University of Dayton, Sinclair Community College, Wright Brothers Institute and United States Air Force.

- **North Central Campus for Emerging Technologies** (Kettering, Montgomery County / CITY, Ottawa County) received more than $2 million for its *Commercialization of Piezoelectric Fibers for Energy Storage and Smart Systems* project. The project, a joint venture between the National Composite Center (NCC) in Kettering and New Jersey-based Advanced Cerametrics, Inc. (ACI), will use piezoelectric fibers to convert mechanical energy into an electric signal that can then be used to initiate a variety of other actuators, sensors, or material properties. Applications for PZT fibers include sports gear, automotive sensors, vibration control sensors, medical devices, disk

drives, and power tools. The project estimated $90 million in revenues by 2012. Collaborators in this project include Advanced Cerametrics, TILAB Ltd., WPAFB, Delphi Corp., National Composite Center, NASA Glenn Research Center and Cleveland State University.

- **Ohio Agricultural Research and Development Center** (Wooster, Wayne County) received more than $1.5 million for its *Development and Commercialization of an Integrated Biomass to Electricity System (IBES)* project, which will develop an electrical generation system that operates on bio-gas derived from renewable mixed bio-mass. Ohio food processors that generate agricultural waste products from their operation could use these wastes in an electrical generation system to result in potential energy savings of as much as $3.5 billion. Collaborators on this project include TMI and New Bio, LLC.

- **University of Dayton** (Dayton, Montgomery County) received more than $1 million for its Development and Commercialization of Long-wavelength Infrared Focal Plan Arrays project, which will develop and commercialize technology for use in infrared detection and imaging. These systems, used for both day and night vision, have applications in the military, homeland security, general surveillance, and a number of commercial applications including aircraft and automotive enhanced vision systems. The project projects business growth of $10 to $15 million by 2008 and will create 60 jobs. Collaborators on this project include Essential Research Inc. and CMC Electronics.

- **University of Dayton** (Dayton, Montgomery County) received a grant of $2.1 million for its *Production of Multifunctional Carbon-based Materials* project. The proposal seeks to improve the bonding ability of carbon nanoparticles to various polymer matrices. Commercial applications include low cost carbon composites for aircraft brake pads and armor, carbon foam for thermal management applications, graphite flake for adhesives and coatings and nanoparticles for molding compounds. By 2009, the project is expected to generate $85 million in revenues and create 300 jobs. Collaborators on this project include Air Force Research Laboratory, NASA Glenn Research Center, Aircraft Braking Systems, Inc., Applied Sciences, Inc., GE Aircraft Engines, Goodrich Corp., k Technology Corp., GrafTech International, Lockheed Martin and Materials Research Institute, LLC.

- **University of Toledo** (Toledo, Lucas County) received a grant of $99,920 for operations fundingto continue its 2004 Wright Project, which established the Center for Photovoltaic Electricity and Hydrogen (CPEH.) The new funding will support a post-doctoral researcher who will install, use and train companies to use the equipment being purchased for the CPEH. Collaborators on this project include McMaster Energy Enterprises, Engineered Glass Products, Midwest Optoelectronics and Innovative Thin Films.

Unveiled by Governor Taft in February 2002, the Third Frontier Project is a ten-year, $1.1 billion initiative to expand high-tech research capabilities, promote innovation, encourage company formation and create high-paying jobs in the State of Ohio. It is the State's largest-ever, technology-based economic development investment, awarding more than $235 million to Ohio-based companies, universities and research organizations to date.

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