

August 31, 2009

THREE NEW UTAH STATE UNIVERSITY USTAR TEAMS RECEIVE FUNDING AND BEGIN RESEARCH IN 2009

Teams aim to commercialize breakthroughs in digital media, veterinary diagnostics, and energy markets

Logan, UT—Thanks to advancements in USTAR funding at Utah State University, emergency responders will make better decisions in natural disasters, doctors will more quickly diagnose diseases in farm animals before they spread, and “green” planners will reduce kilowatts of electricity inefficiently spent to light, heat and maintain Utah’s commercial buildings.

The teams: Interactive Design for Instructional Applications and Simulations (IDIAS), Veterinary Diagnostics and Infectious Disease (VDID) and the Institute for Intuitive Buildings (I2B) join six other USTAR teams at USU, whose cluster areas of strength include energy, imaging technology, and biomedical innovation.

“These teams, in addition to the existing USU USTAR teams, bring great commercialization potential to Utah State,” said Ned Weinshenker, Vice President for Strategic Ventures and Economic Development. “This expansion supports the University’s and the USTAR initiative’s missions to commercialize technology for economic development throughout the state of Utah.”

IDIAS

Utah State University’s Department of Instructional Technology and Learning Sciences has partnered with the Department of Art (Graphic and Interface Design Emphasis Area) for the creation of the Interactive Design for Instructional Applications and Simulations (IDIAS) Institute. The IDIAS Institute builds on USU strengths in instructional design, interactive simulations, and interface design to inform technology research and develop commercially viable and innovative products.

A top goal of this team is to develop products to train security, firefighting, medical and other emergency response teams through the design of a comprehensive group of simulations. Expanding upon recent advances in consumer game technology, the team will develop “serious game” environments to increase the effectiveness of first responders’ decision making in real-life emergencies.

Other areas of research for the IDIAS team include using simulation to measure and evaluate environmental changes, improvements to distance education, and the development of instructional materials for certification programs.

The IDIAS Institute's instructional designs, data-driven simulations, interactive immersive graphics, and user-centered interface designs leverage USU's academic and development strengths within digital media while fostering the University's mission for educational outreach.

VDID

As part of a USTAR focus area in biodevice and biopharma innovation, Veterinary Diagnostics and Infectious Disease (VDID) draws on the strength of USU's College of Agriculture and College of Science to tackle a \$1 billion year market in the United States for animal disease screening and diagnostics.

VDID at USU will provide a "web of innovation by encouraging collaboration between current USU researchers and VDID," said Ken White, VDID team member and department head of animal, dairy and veterinary sciences at USU. "The web between VDID and USU researchers holds the promise of novel ideas and innovative technologies."

VDID has identified veterinary diagnostic tests that have undesirable limitations due to expense, limited reliability and lack of specificity. With these limitations identified, VDID will produce innovative and novel ideas and technologies that will reach the market through new companies and licenses.

"The future livelihood of agriculture is dependent on the success of VDID efforts from a production agriculture standpoint, and from a bio-security and human health perspective," said Bruce King, veterinarian for the state of Utah.

I2B

The Institute for Intuitive Buildings (I2B) team is hosted by the Energy Dynamics Laboratory (EDL), the newest business unit of the Utah State Research Foundation, and joins the 50-year-old Space Dynamics Laboratory in being a top-tier, university-affiliated research and development organization, while focusing on technology commercialization.

Because a considerable amount of energy is wasted in lighting, cooling and ventilating commercial buildings, the I2B team will create real-time scene measurement and interpretation techniques for electric lighting systems.

"Ultimately, we envision a system of intelligent, self-adapting lights capable of meeting variable lighting needs without loss of productivity and with a desirable comfort level," said Paul Israelsen, director of Energy Systems for EDL. "We are conducting research that will automatically determine room occupancy and occupant activities. Our goal is to intelligently adapt lighting levels to reduce energy usage in commercial and residential buildings."

The I2B team's research could save 50 percent of the electricity used for lighting in commercial buildings and make electrical power consumption more consistent, goals important to establishing Utah as a leader in the Department of Defense's Commercial Buildings Initiative.

Supported by established USTAR energy research, the I2B team draws on the experience of sustainable energy researchers at USU.

EDL is currently coordinating the Logan Lagoon Project to harvest algae from Logan City's waste lagoons to reduce phosphorus and for conversion into sustainable and alternative energy in the form of biofuels. The project was initiated by the USTAR biofuels team at USU along with the department of biological and irrigation engineering. The project is one of the first of its kind and positions the partnership of USU, EDL, and Logan City as a leader in the use of algae in wastewater treatment research. USTAR has provided initial funding to organize and launch EDL.

"These three new teams will expand Utah's research and commercialization capabilities in some very important markets," said USTAR Governing Authority chair Dr. Dinesh Patel. "What's also exciting is to see a convergence of activity and collaboration between USU, the University of Utah, and other higher education institutions in the state to solve some of the world's biggest issues."

About USTAR:

The Utah Science Technology and Research initiative (USTAR) is a long-term, state-funded investment to strengthen Utah's "knowledge economy" and generate high-paying jobs. Funded in March 2006 by the State Legislature, USTAR is based on three program areas. The first area involves funding for strategic investments at the University of Utah and Utah State University to recruit world-class researchers. The second area is to build state-of-the-art interdisciplinary facilities at these institutions for the innovation teams. The third program area involves teams that work with companies and entrepreneurs across the State to promote science, innovation, and commercialization activities. For more information, go to www.innovationutah.com or follow <http://twitter.com/Innovationutah>.

Contact: Jacoba Mendelkow, 435-797-9608, jacoba.mendelkow@usu.edu; Michael O'Malley, USTAR, 801-652-5578, momalley@utah.gov; Eric Warren, eric.warren@usurf.usu.edu; Ken White, ken.white@usu.edu; Carolyn Cardenas, carolyn.cardenas@usu.edu.