University does more to help local, state economies

THE UNIVERSITY OF LOUISIANA AT Lafayette is beefing up its efforts to take technology to the marketplace.

"The university's goal with technology transfer is to stimulate economic development from the local level to the state level," said UL Lafayette President Ray Authement. "Our priority is to assist businesses within our community and state while enhancing the reputation and impact of the university."

UL Lafayette plans to reach its goal by promoting the development of intellectual properties – such as inventions, discoveries or works of authorship – on campus.

The university holds 19 registered copyrights, five license agreements and three patents. Ten patents are pending. University administrators want to increase those numbers.

Dr. Ramesh Kolluru will spearhead the effort. He was recently named assistant to UL Lafayette's vice president for Research and Graduate Studies. He remains director of the Center for Business and Information Technologies.

"Ramesh is already doing this on a smaller scale at CBIT. He will now be a liaison working with the university community as a whole," said Dr. Bob Stewart, vice president for Research and Graduate Studies.

Kolluru said he expects intellectual property numbers to rise with the recent opening of the Louisiana Immersive Technologies Enterprise and its connection to the Louisiana Optic Network Initiative.

LITE is a research complex featuring a comprehensive set of advanced visualization systems, including the world's largest 3-D theater and one of the world's first six-sided digital 3-D immersive rooms. (See related story, page 28.) It is powered by a highly integrated concentration of graphics supercomputer-class servers and high-speed networking.

BLANE FAUL

Dr. Ramesh Kolluru

LONI is a fiber optics network that connects supercomputers at Louisiana's major research universities. By combining resources, researchers can take advantage of computation speeds of more than 1,000 times the rate previously possible.

"I think it is a great time for the university to tap into the energy and excitement from assets like the LITE facility and LONI," Kolluru said.

UL Lafayette has established the Louisiana Technology Incubator for Entrepreneurial Success, or LA TIES, to capitalize on that energy. Funded by a National Science Foundation grant, it will help the university create the next generation of technology products and services.

In addition to creating Kolluru's position, the university's web site has also been enhanced to feature more information and resources related to intellectual properties. It now provides forms necessary to register intellectual properties, along with policies and helpful information about technology transfer.

"The web site contains everything a faculty member or researcher needs to understand intellectual properties and procedures. It's a one-stop shop for registering their information or learning more about the process of registering intellectual properties," Stewart said.

http://research.louisiana.edu

CAN COMPUTER CHIP SYSTEMS LEARN TO ALL GET ALONG?

SOME UL LAFAYETTE computer scientists are exploring ways to make different technologies work together on incredibly tiny computer chips.

An example of a MEMS component

"Nanotechnology enables you to have more than one technology within the same chip," said Dr. Magdy Bayoumi, director of the Center for Advanced Computer Studies and head of the Computer Science Department. "So, you can have the standard microelectronics, but you can also have microelectromechanical parts, or MEMS. To make these two technologies in the same package, or to interface them, is a big problem."

But once researchers solve that problem, the ability to have compatible technologies in the same chip will have far-reaching applications in the auto industry, sensor applications and military weapons.

The National Science Foundation has provided $300,000 to develop a laboratory and facilities for nanotechnology in the new computer science building that is expected to open in a couple of months.

"The funding will enable us to do serious work in nanotechnology," Bayoumi said.

He is the principal investigator of the project. The other investigators are Dr. Soumik Gosh, Dr. Mohamed Shaheen and Dr. Ashok Kumar, who are all research scientists at CACS, and Dr. Mohammad R. Madani, an associate professor of electrical engineering and computer engineering.