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Zeke and LONI connected-Network gives state an edge

Advocate staff photo by Bryan Tuck

LSU engineers Ben Blundell, left, and Kenneth Welshons examine Zeke, a supercomputer on the ULL campus, during a Tuesday ceremony for the launch of the Louisiana Optical Network Initiative.

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LAFAYETTE — Decades ago, University of Louisiana at Lafayette professor Z.L. "Zeke" Loflin brought the first computer to campus.

Loflin used that computer to come up with a technology that helped oil companies better monitor well production — which led to him forming his own business, ULL President Ray Authement said.

In the current century, officials hope that Zeke, a supercomputer named for that early pioneer, will bring to campus a similar approach of public research that spurs economic development.

Zeke is the supercomputer portal to ULL's hub on the Louisiana Optical Network Initiative, or LONI, and became officially operational Tuesday.

LONI is a statewide, ultrafast, fiber-optic network that will allow researchers — and the supercomputers they use — to collaborate in real time at facilities across the state.

And Louisiana will have a seat at the global collaboration table through LONI's connection to the National Lambda Rail — which stretches from coast to coast.

At a ceremony to announce the connection Tuesday, Gov. Kathleen Blanco said LONI is the kind of technological tool that can give Louisiana a competitive edge.

Blanco and other officials spoke at the Louisiana Immersive Technologies Enterprise, or LITE, which houses supercomputer-driven 3-D visualization tools and will be available over the LONI network to public and private researchers working on an open-ended list of possible disciplines.

Blanco pointed out that the German manufacturer looking to locate a plant in Louisiana was interested to learn that the LITE facility was unique in the country, and that the LONI network would open up its capabilities regardless of geography.

"This is a powerful economic development sales pitch for us," Blanco said. "It's another important tool in our tool chest."

Blanco has pledged $40 million over the next decade to continue to develop LONI.

Lonnie Leger, a consultant for LONI, said researchers were ready from the moment the switch was flipped to get onto the network and start working.

A group is meeting now to come up with rules and procedures on how the network will be shared, he said.

Steve Landry, vice president for academic affairs at ULL, said the huge bandwidth afforded by LONI will make a big difference in the way information is shared.

For example, had someone sent a file the size of a DVD using early 1970s technology, the file would still be downloading today.

A normal broadband connection found in a home today would take 83 hours to upload the file and 10 hours to download, Landry said.

A file that size would take just a shade over two seconds on LONI, Landry said.

That means the huge amounts of data crunched by today's supercomputers can be shared with almost no delay over LONI.

Researchers interested in hooking up to LITE, or the special grid-computing facilities at LSU, can do so in real time.

"The most important part of LONI is that it brings us all together," said Carolina Cruz-Neira, the director of LITE.

She made her comments Tuesday from a remote location, speaking to the audience of dignitaries that watched a demonstration from yet another remote site.

“The barriers of distance are broken,” Cruz-Neira said.

Just a few months after opening its doors, LITE has signed up private and public interests looking to tap into its and LONI’s capabilities, Cruz-Neira said.“LONI is putting Louisiana on the map,” she said.