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Aerial images of U.S. online

New FIU software provides access

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Researchers at Florida International University Friday unveiled TerraFly, a new software that gives users access to a database of satellite images of the entire United States via the Internet for the first time.

The technology and processes that allow the information in such a large database to be accessed, manipulated and delivered through an ordinary Web browser have been developed at the Miami-based university over the past 10 years.

IBM has provided a \$6.7 million grant to fully outfit the university's High Performance Database Research Center with state-of-the-art hardware and software.

The TerraFly project has received nearly \$30 million in total funding so far, including more than \$3 million in data recently donated by the U.S. Geological Survey.

NASA and the National Science Foundation also are supporters of the project.

"TerraFly provides a new way to access U.S. Geological data," said Naphtali Rische, head researcher on the TerraFly project and director of High Performance Database Center, a unit of the School of Computer Science. "The possible uses for this technology are endless."

FIU's researchers see broad commercial applications for TerraFly's technology, including use for real estate, urban development and tourism as well as use by state and local governments. Financial analysts working with the project estimate TerraFly technology could have an annual market of about \$1 billion.

In a demonstration of a possible commercial use, one of the researchers showed how property information and photos of homes for sale in the university's West Miami-Dade neighborhood could be combined with the aerial images available via TerraFly.

Kathryn Clement, deputy director of the USGS, said TerraFly's technology could be used to protect property and save lives from natural disasters or it could be used for environmental resource management.

Rische said he is in conversations with several venture capital firms to fund the development of commercial uses for the technology.

Rische said that while the U.S. and other nations have huge databases, he believes TerraFly could be the largest such repository of information available to the public via the Internet.

For IBM -- already a supporter of FIU's business school -- the grant is the first time it has funded TerraFly.

"This is a down payment on the future of FIU, its students and our industry," said Adalio Sanchez, general manager of IBM's storage networking division, based in Research Triangle Park, N.C.

While research continues, TerraFly does offer a neat experience for consumers on the Web.

Of great interest to South Florida's Cuban exile community is that the TerraFly database includes imagery of a large section of Havana, the Cuban capital.

While the U.S. imagery was captured by the USGS, the data from the various foreign locations came from outside commercial vendors, Rishe said.

Updating and adding more data is expensive. To provide a complete aerial view of the island of Cuba would cost \$4 million, he said.

Todd Martinez-Padilla Simmons, a university spokesman, said providing the satellite imagery to the public via the Web doesn't pose a security threat, even during this time of heightened alert following the Sept. 11 terrorist attacks.

Simmons said the data has been cleared with U.S. law enforcement officials. And in its raw state, before more information is added during commercial uses, TerraFly doesn't provide any more information than a topographical map.