UC SANTA BARBARA

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Library of Congress Names UCSB Visionary a ‘Pioneer of Digital Preservation'

On Nov. 3, election night, almost every television news station and Web news site displayed an interactive map of the United States with real-time voting results.

The maps shared a common feature: geospatial technology analyzing a range of geographic-based coordinates and data.

The technology has evolved over the last three decades from specialized academic obscurity to the ultimate form of public acceptance.

It is now just another information-age appliance running discreetly in the background and taken for granted in a Google world.

Larry Carver, who recently retired as director of library technologies and digital initiatives at UC Santa Barbara, is among the visionaries who enabled this transformation.

For his seminal role in collecting and preserving our digital heritage, the Library of Congress has named Carver a "Pioneer of Digital Preservation."

"We at the UCSB Library are thrilled that Larry Carver has received this important and well-deserved recognition," said Brenda Johnson, university librarian.

"His tireless and innovative work in the development of the Map and Imagery Lab and the Alexandria Digital Library has brought international attention to our library and has benefited thousands of scholars, students, and members of the public from around the world.

We offer him our heartiest congratulations on being named a Library of Congress ‘Pioneer of Digital Preservation.'"

The Library of Congress's Digital Preservation Program has only existed since 2000.

The relatively new field of digital-information management relies on individuals and organizations that are willing to embark on cutting-edge programs that will lead others to follow their examples.

Because no one institution can tackle the challenge of digital preservation on its own, the Library of Congress has over 130 partners who share knowledge and experience, including the University Library at UCSB.

Carver began his career at the library where he helped build an impressive collection of maps, aerial photography, and satellite imagery that led to the development of the Map and Imagery Laboratory (MIL) in 1979.

As the MIL collections grew, Carver felt that geospatial data presented a unique challenge to the library.

He believed that coordinate-based collections should be managed differently than book-based collections.

But not everyone agreed with him.

"It became apparent that handling traditional geospatial content in a typical library context was just not satisfactory and another means to control that data was important," he said. "It wasn't as easy as it sounds.

I was in a very conservative environment, and they were not easily convinced that this was something a library should do."

Carver and others spent years developing an exhaustive set of requirements for building a geospatial information management system.

The system had a number of innovative ideas.

"We included traditional methods of handling metadata but also wanted to search by location on the Earth's surface," Carver said.

"The idea was that if you point to a place on the Earth you could ask the question, ‘What information do you have about that space?,' as opposed to a traditional way of having to know ahead of time who wrote about it."

An opportunity to develop that system arrived in 1994 when UCSB received funding from the National Science Foundation for Carver and his team to build the Alexandria Digital Library.

"We produced the first operational digital library that was based on our research," Carver said.

"Our concentration was to be able to develop a system that could search millions of records with latitude and longitude coordinates and present those results via the Internet."

The basic concepts behind the Alexandria Digital Library have been widely adopted by Google Earth, Wikipedia, and others.

Carver couldn't be more delighted.

"I think it's wonderful," Carver said.

"We weren't trying to be the only game in town.

We were just trying to raise consciousness way back in the early 1980s that this was a viable way of handling geospatial material.

This approach lets people interact with data in a realistic way without having a great deal of knowledge about an individual object.

It was a new way of dealing with massive amounts of information in an environment that made finding and accessing information much easier."

In the process of system development, the MIL accumulated a great deal of national spatial content, much of which came from government agencies.

The National Aeronautics and Space Administration donated its Landsat satellite data collection.

Other collections came from the U.S. Geological Survey, the Department of Agriculture, and the National Oceanic and Atmospheric Administration, and from private corporations and individuals.

The most recent addition to the MIL is the Citipix Collection of more than 370,000 aerial images of 65 major metropolitan areas in the U.S. shot between 1999-2002 at a six-inch resolution.

UCSB's imagery collection is one of the most extensive in the U.S. academic community.

In all, the UCSB Library has between 6 and 7 million images and over 500,000 maps in its collections.

UCSB's Map and Imagery Laboratory serves the academic and research needs of the University of California, the state university system, business, industry, federal and state government, and other domestic and foreign educational institutions.

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About UC Santa Barbara

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