UC SANTA BARBARA

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INTERNET EXPLODES WITH 'LOCATION' INFORMATION

The amount and type of information that can be easily found on the Internet is exploding practically overnight, thanks to a federally-funded university research project.

The Alexandria Digital Library (ADL), a unique, new online digital computer system for finding information about any place on Earth, is being launched by the University of California, Santa Barbara, the university that is also the birthplace of the Internet.

It is now possible to find well-documented geographic information about any location on the planet instantly through the ADL, much of it facts and images that were once obscure. The material includes current satellite data that can be viewed nearly as quickly as it is recorded.

The new library is part of the first major university digital library, the California Digital Library, a project of the University of California Office of the President.

Its creators say the Alexandria Digital Library is the first library in the world to organize geographic information with a new standard in library indexing procedures. Besides looking with the traditional library catalog information such as name, subject and author, it's now possible to summon information by simply pointing to a spot--large or small--on the Earth's surface.

Unlike most of the information available through the Internet, all the material has been verified, sorted and indexed according to systems used by university librarians.

"Although we have had maps, images and photographs available on the Internet, until now there was no mechanism to search for them spatially," said Larry Carver, head of UCSB's Davidson Library Map and Imagery Laboratory, and one of the architects of the ADL. "In other words, we can now identify a place on the Earth's surface and say, 'What have you got for this area?' and that's what ADL does."

"Once people see the power of it they just go nuts," said Carver. He predicts that individuals seeking information about a particular location--from real estate agents to lawyers to government officials--will create a tremendous demand for the new system once it becomes widely known and available. Currently the ADL can only be accessed on computers within the University of California system where it will be tested for the next 12 months. The project goal is to make the ADL available to the general public as soon as the test period is completed.

Large amounts of data are loaded daily by the ADL--so far, the system houses a database of seven million entries. Initially the collection is focused on the state of California, although it already contains a significant amount of data covering the entire planet. A few examples of the online data are:

· "space pix," current space shuttle images in color, covering

selected regions of the earth with the smallest visible ground

detail to about two kilometers;

· "advanced very high resolution radiometer" images in black and

white which are captured by satellite and show ground detail of

about one kilometer;

· "digital orthophoto quadrangles" which are digital "image

maps" that coincide with existing printed U.S. Geological Survey

topographic maps but reveal photographic features and show

ground detail of about one meter; and,

· historic aerial photographs of California which show ground

detail of about one-half meter;

· Central Intelligence Agency country maps, at various scales,

covering all of the world's countries.

Besides maps and images, the ADL indexes a vast array of place-related information. Rainfall, street locations, earthquake data and many other types of information can now be accessed through one window.

"That's the power of it," said Terence R. Smith, ADL project director and professor of computer science at UCSB. "With a single system you can find what's out there even though some of it is stored in other locations." He noted that some of the data is now stored in the supercomputer at the University of California, San Diego, and eventually the system will access data stored all over the world.

"It's a technology that's so phenomenal that we're almost afraid to let it loose, because we know we will just be swamped," said Carver. "Every real estate agent will want to find out all the information about every site--geologic maps of a site, soil surveys, what the house looked like ten years ago. We need a much bigger server to be able to handle the traffic that we expect."

The new technology takes out the middle man, according to Smith. "It's one stop shopping between the library and your desktop--without ever having to leave your office."

In addition to working closely with the California Digital Library, the ADL is cooperating with other major libraries including several located at other major universities and the Library of Congress. The ADL was developed as part of the national Digital Library Initiative (DLI) jointly funded by the National Science Foundation (NSF), the Defense Department's Advanced Research Projects Agency, and the National Aeronautics and Space Administration. Other public institutions and private companies are involved in partnership with the ADL, including for example, Microsoft, Hughes, Informix, Oracle, Digital Equipment Corporation, the U.S. Geological Survey, and the U.S. Navy.

The NSF is also funding a related digital library project in Moscow and St. Petersburg using the Russian supercomputing facility in St. Petersburg.

For more information check the ADL website at http://www.alexandria.ucsb.edu

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