

- NEWS
- METRO
- COMMUNITY
- OPINION
- OBITUARIES
- BUSINESS
- DAILY SPECIAL
- SPORTS
- WEATHER
- VOICES



- MARKETPLACE
- LEARNING CENTER
- ENTERTAINMENT
- JACK'S CAFE
- YELLOW PAGES
- ABOUT US
- SEARCH
- HOME

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## Extra dimension

### Professor-patented mapping device combines old, new

By Simon Barker-Benfield  
Times-Union business writer

Just in time for the 21st century, John Alexander has re-invented the 19th century stereopticon and the 20th century View-Master stereo slide viewer to make electronic mapmaking easier.



Professor John Alexander at the University of North Florida with his Gator Communicator Model IV prototype.

-- Bob Self/staff

So welcome to the new gizmo, which has the working title of "The Gator Communicator," a name that reflects years of teaching at the University of Florida by Alexander, now distinguished research professor and director of the new Applied Global Systems Lab at the University of North Florida.

On the patent that Alexander received July 4, the device is called "The Geographic Data Manager."

"What it does is take stereo pictures and constructs the position of the thing we are mapping," Alexander said .

The communicator combines two digital cameras set about 18 inches apart; an electronic compass; an electronic inclinometer or level; a receiver that brings in location information from a Global Positioning System or GPS satellite; a viewing screen like a small computer screen; and an on-board computer and software to integrate the work of all the parts. There's also a two-way radio and a cellular phone.

Alexander said that the View-Master's stereo picture suggested a way to use the slight difference in viewing angle between each image to calculate the location of objects for mapmaking purposes.

The communicator is surprisingly light -- maybe 4 pounds.

If all goes well on the manufacturing side, sometime next year a police officer could go to the scene of a wreck, point the communicator at the vehicles involved, view a three-dimensional image of the wreck on the device's screen, and then either store or transmit the image by touching the screen.

Later, the officer could download the information on a computer equipped with mapping software and create a precisely accurate map of the wreck and its environment.

Or the officer could touch a button and send the information back to the station -- or anywhere in the world -- to be mapped.

Emergency management workers also will find the equipment handy if they need to respond rapidly to a disaster.



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Alexander demonstrates the touch screen of the Gator Communicator device he developed to do three-dimensional mapping and data collection.

*-- Bob Self/staff*

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"The disaster team could go in, take pictures," said Alexander. "We can wirelessly then send all these pictures back to the base area, everybody could see the damage, they can map the damage."

Alexander has been tinkering with the communicator since about 1992 -- the current prototype is the Model IV -- adding features as he goes along.

Development of production models almost got off the ground last year with a Silicon Valley firm, but management turmoil and departures

derailed the effort and the development license lapsed.

Alexander is the inventor on the patent, but the University of Florida owns the patent rights. The university is prepared to license the patent, but it wants the developer to have a business plan, said Alexander.

Alexander has now been joined by two other UNF technology professors in the project: Jerry Merckel, who had a career as a top IBM computer technologist and is now a professor and associate dean of the College of Computing Science and Engineering; and David Lambert, a visiting assistant professor at UNF.

The trio are putting together a company, to be called GeoAge, and have picked a president and chief executive, Dick Crosby, a former executive with Digital Equipment Corp. and Compaq Computer Corp. They expect to move this fall into Enterprise North Florida's

"incubator" for start-ups in the Liberty Business Plaza on Belfort Road.

"They are one of the initial groups accepted for occupancy in the incubator," said Al Rossiter, president and chief executive of Enterprise North Florida Corp.

Rossiter said that he expected to start with about 10 fledgling technology companies in the incubator, officially called The Technology Enterprise Center.

"It is custom-designed flexible space with all business services and business assistance and Internet connections," said Rossiter.

Tenants pay market rates for space and have access to a broad array of both clerical and professional support services ranging from word processing and bookkeeping to recruitment and investment banking.

Meanwhile, Crosby, who was linked with GeoAge by Enterprise North Florida, is working on a business, marketing and funding plan that will persuade the University of Florida to license to GeoAge the technology developed by Alexander.

"I don't expect we will manufacture," said Crosby. "We will license the technology to others."

Crosby said GeoAge might also have units manufactured for its own specific data collection needs.

Crosby said the communicator would be useful for companies such as real estate developers, real estate managers or utility companies with multiple assets to keep track of.

"The communicator is great for standing at the edge of a swamp, mapping the location of a pole [without] sending someone out in a boat," said Crosby.

In the meantime the UNF lab has other projects under way.

"The new Global Systems Lab makes uses of devices like the communicator in its internet GIS-based [Geographical Information System-based] research," said Merckel.

