

Cutting edge of cartography

With a St. Cloud State computer system, maps of all kinds are a keystroke away

By JOHN WELSH
Times Staff Writer

From finding the fastest route for a fire truck to compiling sales figures for the homes in your neighborhood, new computer technology soon could revolutionize the way local government handles the vast amounts of information it keeps.

Recent advances now allow a single computer to store a map that in a matter of seconds can show an area's topography, property owners and tax payments, zoning, utilities or just about any other information displaying geographic data.

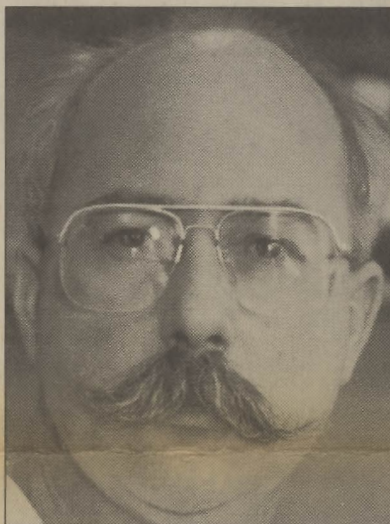
Planners hail the new technology saying it will allow for better decision-making especially in light of growing awareness of environmental concerns such as wetlands preservation or ground water contamination.

"It's a very useful tool," said Bill Hansen, executive director of the Area Planning Organization. "The whole country is going into it and we are just on the edge of it."

But it does not come cheap, and at a time when elected officials are facing tight budgets some are questioning if it is a necessity or unneeded frill. On Monday night, St. Cloud City Council members tabled a plan to enter into a pilot program using the technology until they could get more information on the startup costs, which are estimated at about \$50,000.

"My skepticism is that this might be another computer that is nice to have but something that the taxpayer can't afford," said Council President Larry Meyer, who supports the city's involvement in the pilot program.

Although some may question the need for this new system, few are not impressed by its capabilities, which will not only aid those who plan cities and counties but also those who live,



Bob Bixby
Of geography information center

drive and shop in them.

Want to build a house in the country? A trip to a single office in the courthouse could eventually yield information on housing values, drainage, zoning or well problems in the area you are interested in.

Want to know the fastest way to get across town during rush hour? A traffic model could give time-specific routes or the best way to maneuver around St. Cloud.

"It empowers citizens to see what's happening," said Bob Bixby, geography professor at St. Cloud State University. "It will make it easier for them to get information."

Bixby is co-director of St. Cloud State's new Center for Geographic Information Systems, which has become a regional leader in the new technology providing training and information to several state and local agencies.

Through a gift from the software company and a discount from International Business Machines, the university last year installed a half-million dollar GIS lab for about \$120,000.

The high-power computer workstations allow for a variety of maps to be "layered" upon each other.

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giving the user a unique opportunity to combine vast amounts of information into a single source.

For example, St. Cloud and three other local government agencies are planning to team up under the St. Cloud Pilot Project that will place the St. Cloud area under a single mapping system with sections, roads and city utilities. In the city's case, four maps that are in constant need of updating — the city map, sanitary sewer map, storm sewer map and the water main map — will be under one computer program.

Eventually, other information can be added to the system and it could be

expanded for the entire county.

"It will make it easier for people to see tremendous amounts of information all at one time and make sense of it," said Stearns County Surveyor Leland Carlson-Wallace.

Such computer capability has been accessible at this level for only about the last four years, Bixby said. Since then more government agencies and businesses have been turning to GIS technology to store and manipulate mapping information.

St. Cloud State has taken a leadership position and students are showing interest. Two years ago the geography department had one graduate student; by this fall that number will be around 18. The department is considering adding a GIS certificate and a GIS minor. It already

offers a masters of science degree with a GIS concentration.

Although the St. Cloud pilot project represents the first attempt by area agencies to get into the new technology, larger cities like Minneapolis and Rochester already have started.

One question mark, however, is how fast will the new system come on-line. Getting information into the system can be a time-consuming process. So far Stearns County and St. Cloud are proposing buying just one GIS workstation each, but if all goes well the system could grow quickly in coming years.

"It's a long, on-going process," said Stephen Gaetz, assistant city engineer. "We'll have to take it one step at a time."