

BUSINESS

Eagan, McAllister Shows Off GIS Technology at Roundtable

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GIS, Geographic Information Systems, is a software tool that can be used to analyze and map just about any object on Earth - from Chesapeake wetlands to sprawling urban landscapes, military complexes to mini-malls.

Last week during International GIS Day, Eagan, McAllister Associates, Inc. in Lexington Park invited Southern Marylanders and others to learn more about the technology and its applications.

The technology has been available on a limited basis for about 15 years but has only had accessible desktop applications for the last five or six. It integrates database capabilities with the matchless visual perspective of a map, making GIS unique among software information systems.

The resulting analyses can be used in a myriad of enterprises, both public and private, and its proponents argue that it can lead to better-informed decision-making, cost reductions and long-range planning.

In 1992, in response to multiple military base closures, a shrinking budget, and less people to deal with an increasing workload, Department of Defense officials contracted with EMA, a defense contracting company founded in St. Mary's County, to

provide Patuxent River Naval Air Station with GIS information.

Currently 231 computers at Pax River access GIS information. Their focus is primarily public works and public safety.

But the Navy base also makes use of the facilities management and natural and cultural resources management aspects the technology offers. Cultural resource managers at Pax River requested the development of what is known as a predictive archeological model. The model defines areas with high, moderate and low probability of containing prehistoric remains based on several factors, such as proximity to water and soil types. The resulting maps allow the public works department to direct development toward areas where there is low probability of prehistoric activity. This would limit any expensive work stoppages or delays and preserve the installation's significant archeology.

Tim Maidl, deputy program manager of GIS support for Eagan McAllister, said that GIS applications come up in unexpected ways. "Recently we got a phone call when the Blue Angels were getting ready to perform at the naval air station," he said. "There was some construction slated in close proximity to where the white lines were to be painted for the Blue

Angels. They wanted know if the construction would be in the way or if the guide lines could be placed elsewhere. We made a few calculations based the GIS data and told them the best placement for the lines. It's a really far-reaching technology."

The Naval Surface Warfare Center at Indian Head has also made use of GIS. There is a hunting program on base and the GIS data, which is constantly updated, lists the number of hunters, number of deer kills, number of shots and types of weapon used. This information is useful in determining the health of the deer population. It also tracks where the deer are spotted.

Jonathan Linn, a GIS analyst with Eagan, McAllister, noted that where the hunters seem to go and where the deer are spotted most are not at all in close proximity to each other. He speculated that transportation or road accessibility might have something to do with it.

St. Mary's College also is using GIS. A recent EPA grant was awarded to study the bio-integrity of the St. Mary's River.

"A large number of samples have been taken from points up and down the river said Vince Formica, a junior at St. Mary's College and an intern with the St. Mary's River Project. "We take the data from the samples and download it into a laptop. We can

extrapolate existing data from the Department of Natural Resources and other sources. From all that we can do some forward modeling and predict the impact that widespread county growth might have on the river."

In addition to many demonstrations of GIS software and some hands-on workshops, a roundtable discussion was held at EMA to talk about how GIS technology can be better

integrated among those who use it. The discussion was designed for DoD personnel, but was also attended by representatives from St. Mary's College, the St. Mary's County Department of Planning and Zoning, the Department of Natural Resources and other county agencies. The idea behind the roundtable was to encourage the sharing of ideas and resources. One of the biggest factors at issue was that each agency was

unaware of the information another might have or be willing to share.

Linn said integration was the key - who has what information, where can it be found, who pays for it and how can it be usefully exchanged.

He added that in a county like St. Mary's where rapid growth is a major concern, the information GIS can provide is vital to every member of the community.

