

Making GIS and CADD Work for You: MARKETING DEVELOPMENT PROJECTS

By John G. Cooley

You are in the process of locating a new industrial park in your locality. To make an informed decision, you have collected an immense amount of data on your locality from a variety of local, state, and federal sources. It arrives at your office in a variety of formats, scales, and coordinate projections. Working with this stack of data manually can be a long and arduous task. Using computers to manipulate the data can make the task much easier and will give you a tool that can be used now and built on in the future.

Deciphering the information collected is relatively easy using computer programs, such as a computer aided design and drafting (CADD) program and geographic information system (GIS) software. CADD is a way of drafting that is much more exacting than manual techniques. A GIS is a program that allows the user to combine both graphic (map) and textual (database) information allowing analysis on the given area. The process of converting the data to a form which the GIS can use should be done in several steps.

- The data should be put into a common digital format, that your GIS can recognize; and
- Importing the digital data into the GIS package.

During the "import" operation all of the data will be transformed to a common coordinate projection. It will no longer matter to what scale the drawings are created, if they are in the same coordinate projections, once imported, the drawings should fit, and

- Analysis of data.

With all of the information in the GIS, you can do your analysis to locate the best suited areas for an industrial park.

Now that you have completed your site selection process, what other benefits can be obtained from the data gathered?

Digital information is versatile and can be ever expanding. Draw-

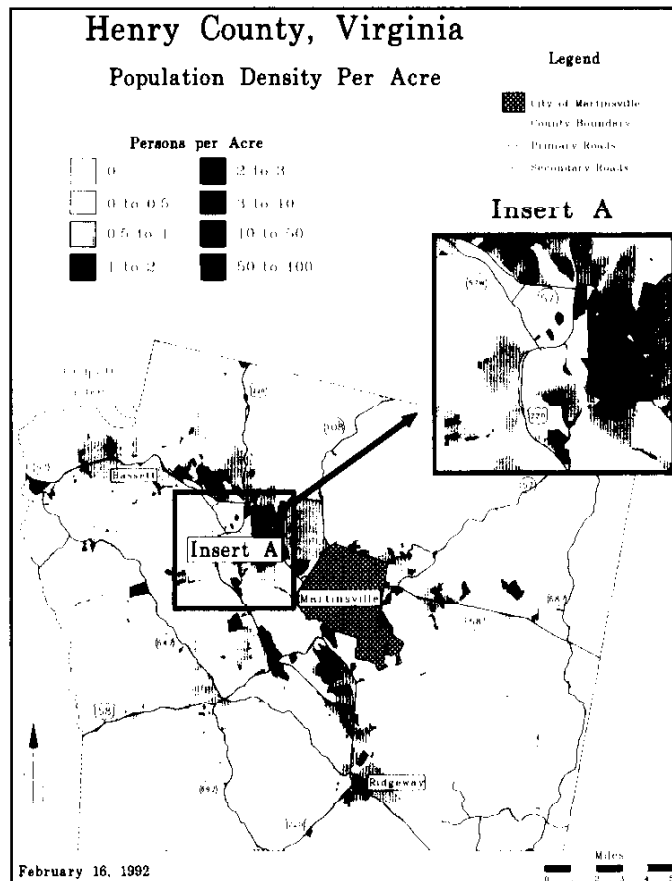
ings can be used for several different projects with no more than a few keystrokes. When a drawing's usefulness for one project has ended, it can be put back in storage, with all the updates, waiting for the next time it will be retrieved.

We recently worked with a county on an industrial site selection study. The base mapping for this project was taken from their highly accurate Enhanced 911 mapping, which had been created from aerial photography. The information needed by the county to make an informed decision concerning the industrial site was imported into this base map. Also, the county was interested in identifying any wetlands on another piece of property it owned. With the data in the GIS, and having digital

mapping of the site in question, it was fairly easy to pull the site drawing into the GIS and add the wetlands overlay.

Currently, the county is working with the local planning district commission and again using the data in the GIS to aid in the creation of an open space plan.

The county is also in the process of applying for Community Development Block Grant funding. One phase of this CDBG project is performing demographic surveys of the area. These surveys allow the county to locate low or moderate income people. Using the 911 mapping, the county was able to determine exactly how many houses were in the area, and where they were physically located.



All of the projects mentioned above started with base mapping supplied by the county's 911 map-base. The mapping is a digital resource that did not stop providing benefits once the initial project was completed. Through careful maintenance and updating, the county has been able to use the data on numerous other projects, eliminating duplication of effort and wasted time.

Many of the benefits derived from a GIS come from a technique termed "layering." Layering allows the user to place various types of information on different tiers or levels of a drawing. The layers can be turned "on" or "off" to view only the information necessary for a query. For example: The planning department could be working on the tax mapping and zoning layers to help track building permits, while the engineering department is looking at the topographic and utilities layers to decide how the new water and sewer system should be designed. The police department could be using the GIS to track crimes throughout the locality to determine where they might need to increase patrols. And with each department updating the mapping as it comes into their offices, data would not be easily lost going to a central department for input.

Now that you have all of this information in the GIS and the different departments are using it and updating it, how is this going to help you market your locality in terms of economic development?

The data that you have in the GIS is the base you are going to build on that will allow you to showcase your community. Think about it. What do businesses and industry want? They want to know about everything you did for the site selection process, right? These same people want to know what amenities are in the area, what the makeup of the community is, what the quality of life is. All of this can be shown graphically through the use of computers.

I heard a story recently about a man who was relocating his company. He had narrowed the new location down to two sites. Both sites were equal in ranking, so the man had a hard choice. The man was married to a woman who enjoyed flower gardening. One of the localities competing for the industry had a garden club. Guess where the new plant was

located?

Companies today are not just interested in the industrial site. Companies want to know what amenities are there for their employees. Based on this fact, how can we continue to build on the data already collected in our GIS? We can include in the GIS mapping another layer, or several layers, that contain the recreation and/or the amenities of your area. This could include golf courses, boat ramps, resorts, etc., and all of the natural features within your jurisdiction.

HOW CAN DEMOGRAPHICS PLAY A ROLE IN ECONOMIC DEVELOPMENT?

A developer is planning to open a business in your community, such as a convenience store. This person does not want to build in an unpopulated area. Using the U.S. Census Bureau information you can show the developer where the population concentrations are in the locality. Our map (front of page) shows the population distribution for Henry County, Virginia. All of the information necessary to create this map was included in the PL94-171 data, that was released to aid in the political redistricting process. Some communities have gone as far as to put businesses into their GIS. This could prove helpful in locating an area in need of a particular type of service. Having this information readily available, it is easier to position your community to accommodate a prospect's needs.

There is other information available through the Census Bureau that can be used to help highlight your community. The Census Bureau is releasing information on housing costs, mortgage payments or rent payments. It's releasing information on marital status, family size, and people's ages. With all of the information currently available, and more coming out every day, you can show potential clients how the demographic makeup of your community can benefit them.


COMPUTERS AND SITE MARKETING

You have your industrial park ready for its first occupant. Water and sewer are available. All sites within the park have road access.

Everyone in the locality is ready for an industry to move in. How can you increase your chance of being selected as the new industrial site? The answer: computer graphics.

During the site engineering phase of the site selection process, highly detailed digital drawings of the site would have to be generated. These drawings can be transformed into three dimensional images. These images can be constructed to show how each phase of the site development project would appear. By showing the potential client how the property would look during each phase of the development, *before* the actual work is done, you have the ability to manipulate the project to fit the client's vision. Interactive computer generated shows can be produced using both the two dimensional and three dimensional drawings generated during the project.

Wythe County, Virginia incorporated such a technique when marketing an industrial site. Harry J.G. Van Beek, President of Klockner-Pentaplast of America had this to say: "The 3-D computer generated presentation was instrumental in Klockner's selection of the Rural Retreat site for its multimillion dollar plant." This shows what power computers possess in aiding localities with their economic marketing.

Using computers to aid in your economic development projects will bring benefits to your community that are far reaching. There are many technical tools available to aid you in your marketing projects. There was not enough room here to discuss, in depth, all of the services and tools available. We did not talk about Desktop Publishing packages that allow you to set up your own "print shop," including word processors, paint programs and scanners. Also, no mention was made about output devices, laser printers, color printers, electrostatic plotters, or hardware to produce color slides for presentations. With the wide range of products and services on the market to help you market your community to its fullest extent, don't you owe it to your community to find out about them? 

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