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2001 Forum

The Role Of GIS In The City Of Traverse City's Assessor's Office

BY LAURIE SPENCER,
GRAND TRAVERSE COUNTY EQUALIZATION DIRECTOR



Laurie
Spencer

Deb Chavez, Traverse City's Assessor, has found that GIS can help her office do assessing functions more efficiently and effectively outside of the office in the field as well as in the office as review tool. Each parcel on a digital tax map is linked to the data stored in the City's CAMA system by a parcel code number.

The vast amount of tabular information about properties within the CAMA system is then available for display geographically. For example, Traverse City uses BS&A Software for appraisals which contains approximately 3,000 fields - a wealth of information that can be tapped for better assessing practices!

PERSONAL PROPERTY APPRAISALS

The City has been busy implementing some procedures for the discovery of personal property by using a combination of the CAMA database, the GIS system, and field work. The valuation of personal property creates some unique challenges

for the assessor. The City, as well as other assessing units around the state, canvasses annually for new personal property. This method usually consists of driving up and down the streets, using Doing Business As (DBA's) files, building permits and other information to locate new personal property. Using the GIS to do this job more efficiently came to Deb through an indirect route, which is often how discovery happens. The City Assessor's office was frequently getting calls asking questions such as "Who owns the Burger King on Division Street?" Unless the staff knew that Bison Realty was the owner of the real property, they had no way of providing the needed information. But if a question gets asked often enough, a wise person starts looking for answers. The City began using a field in their CAMA database called "related parcel number." The real property code number was placed in this field in the personal property account. This allowed staff to query on the name Burger King on Division Street and link to the real property parcel number to obtain the assessment roll information regarding the parcel.

Who is doing What in GIS and Spatial Technology?

ORGANIZATION: CENTRAL UPPER PENINSULA
PLANNING AND DEVELOPMENT (CUPPAD)
REGIONAL COMMISSION

POPULATION: 161,170

LOCAL UNITS: 70 TOWNSHIPS, 12 CITIES,
5 VILLAGES

YEARLY BUDGET: APPROX. \$125,000



OVERVIEW

CUPPAD is a voluntary association of local governmental units located in the Central Upper Peninsula. Primary responsibilities include: planning and zoning, mapping (GIS), grant writing and researching, and serving as a forum for local leaders to collectively discuss problems associated with local governmental units.

GIVE A STATUS OF YOUR PROGRAM:

Until three years ago, rudimentary maps were created using DOS Atlas software, photocopy machines, or time consuming manual techniques. At that time an evaluation was conducted which concluded that the current mapping capabilities did not adequately address the needs of CUPPAD's planning staff. This need and a very supportive administration were the driving forces behind CUPPAD's GIS implementation. Throughout the past three years, the "mapping system" has grown from a 386 computer, an old pen plotter, and two filing cabinets to a robust, functioning, well-utilized GIS.

Currently, CUPPAD's GIS department consists of 2 full-time staff, 2 NT computer stations, single licenses for ArcView + Spatial Analyst and ArcInfo 8.1, HP 750 plotter, HP 1100c printer, CalComp digitizer, Toshiba Laptop, and a Trimble Pro XR GPS unit with datalogger.

DESCRIBE ANY NEW PROJECTS OR ACTIVITIES:

Over the past year, CUPPAD has undertaken several specialized projects including a coastal atlas update, MDOT highway study, region-wide zoning generalization, and various sub-projects falling within a pre-disaster mitigation grant. CUPPAD is also experimenting with cemetery plot mapping, and a variety of digital orthophotography applications.

Currently, CUPPAD's GIS staff has been consumed with a project that indirectly addresses phase II (geographic representation) E911 legislation. CUPPAD has been working with Marquette County to create GIS layers that emergency personnel (dispatchers, EMT's, firefighters, etc.) will find useful. This project consists of obtaining GPS points for road centerlines and access points, gathering fire hydrant, dry hydrant and draft point locations, and digitizing gas, electric and telephone service area boundaries. The data will be incorporated into Marquette County's 911 system once phase II upgrades have taken place.

WHAT WOULD YOU DO DIFFERENTLY IF YOU HAD TO START OVER?

The very first thing I would do is convert CUPPAD's existing digital data from NAD 27 to NAD 83. Now with hundreds of data sets (all in NAD27) we have quite a job ahead of us converting to NAD83 — not to mention the three hundred or so projects that will be affected by the conversion. Secondly, I would not build a GIS using a sub-standard GIS package. A year and a half into the development of our GIS, we found that our current GIS software could not fulfill the needs of our organization. The GIS team then purchased a better package and began the process of converting our layers from one format to another. Finally, I would develop a bulletproof file management system for our GIS layers.

WHAT VALUABLE PIECE OF INFORMATION HAVE YOU LEARNED THAT YOU WOULD YOU LIKE TO SHARE WITH THE GIS COMMUNITY?

If I had a piece of advice to send on, a good file system is it. A well-structured file management system can eliminate hours of headaches and will encourage an organized GIS.

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Message from the Quality Committee



Brian Berdanier

Last year the Quality Committee introduced the IMAGIN Achievement Awards at the Spring Forum and the Map Gallery at the Annual Fall Counties and Users Conference. The response to both of these programs in their first year far exceeded the committee's expectations. We had the opportunity to honor some outstanding people in our profession with the Achievement

Awards. Truly, the power of GIS was on display with some amazing presentations in the Map Gallery.

As you have all previously read, the new Forum is a combination of the traditional Spring Forum with the Annual Fall Counties and Users Conference. In keeping with this announcement the Quality Committee will be combining the award programs at this year's newly expanded Forum. Because

of this, we are looking forward to an even greater response to the award programs this year.

We are pleased to announce that a new award event is being unveiled at the Forum this year. The Events Committee, in conjunction with the Quality Committee, is establishing a Student Paper Competition. The joint committees see this as a way to continue to generate interest in IMAGIN and grow our professional society, as well as our profession. It is our hope that through this competition students at Michigan colleges and universities will be exposed to our organization and the benefits IMAGIN can provide.

Watch the Web site and future newsletters for information on the award programs. We hope all of you will find a way to become involved in one of the award events this year. The opportunity is yours to nominate an individual or group, to show off a poster or to nurture a student. It goes without saying that the opportunity to network with your peers and to enhance the quality of GIS across the state of Michigan exists with your involvement at the Forum and within IMAGIN.

TRAVERSE CITY *continued from page 1*

One day while answering a similar request, a lightbulb went on for Deb. Since the personal property file contains the related real parcel number, this field could also be used as a tool to locate missing personal property by checking commercial and industrial buildings that did not have a business listed. Realizing that businesses could be non-taxable, the appraisers were instructed to indicate this in the personal property account. To check this process, Deb, using ArcView, created a link between the personal property database and the tax map. The commercial and industrial properties were color coded on the map to make them highly visible.

A click on a parcel brought up the personal property accounts for that property. If a commercial or industrial property was clicked on and no personal property accounts were present, the red flag was raised and the parcel was scheduled to be field checked. This application allows staff to literally walk down the street on the computer to see what may be missing (see Figure 1).

Maps were also generated which showed the address and parcel number of the real property and then a list of the businesses that are supposed to be in those buildings. Appraisers took those lists into the field and physically verified that the business was still there, recorded any name changes in the business, checked that the related parcel number was correct, checked that the physical address was correct and so on. The first year that the cross-reference between real and personal property was used in the City approximately 400 new businesses were added to the tax rolls. They hope to add a palm top computer to this process in the near future.

REAL PROPERTY APPRAISALS

The GIS System was also used in many other ways by the Assessor's office. It was used to detect disparities between the selling price and assessed value. The GIS system was used at Board of Review to help streamline the work that goes into the defense of values. When a taxpayer complained that the property was over-assessed, a map (see Figure 2) showing comparable sales, with property images and information on size, location, recent sale prices in the vicinity, building and



Figure 1. Using GIS to locate missing personal property.



analysis capabilities of the GIS, features were identified that affected property value. In this instance, zoning and sales were overlaid. It was discovered that some parcels were zoned C-1 Commercial and some were zoned R-1 Residential. Zoning was indeed affecting value!

The GIS was also used in other ways. Through the years many people had a hand in the appraisals for the City. Each structure has a class associated with it, such as Class A, Class B, Class BC, Class C, Class CD and Class D. There are also stories heights such as 1 story, 1-1/4 story, 1-1/2 story, 1-3/4 story, 2 story, Bi-Level etc. Class and story heights are used in pricing the structure. The City has photos of most properties which were then linked to the GIS. A query was done on all Class A structures. Using the data represented in Figure 3, a visual could then be done to see that all Class A's were indeed Class A as defined in the State Tax Commission Manual.

It was discovered that some Class A's on the water should actually be classed lower and the land values and ECF's should be adjusted. Land values were also displayed on the map. Color coding picked up discrepancies in land values for parcels located side-by-side. It was discovered that in the past land values were assigned by address and some parcels were addressed off the alley and some off the main street. Patterns

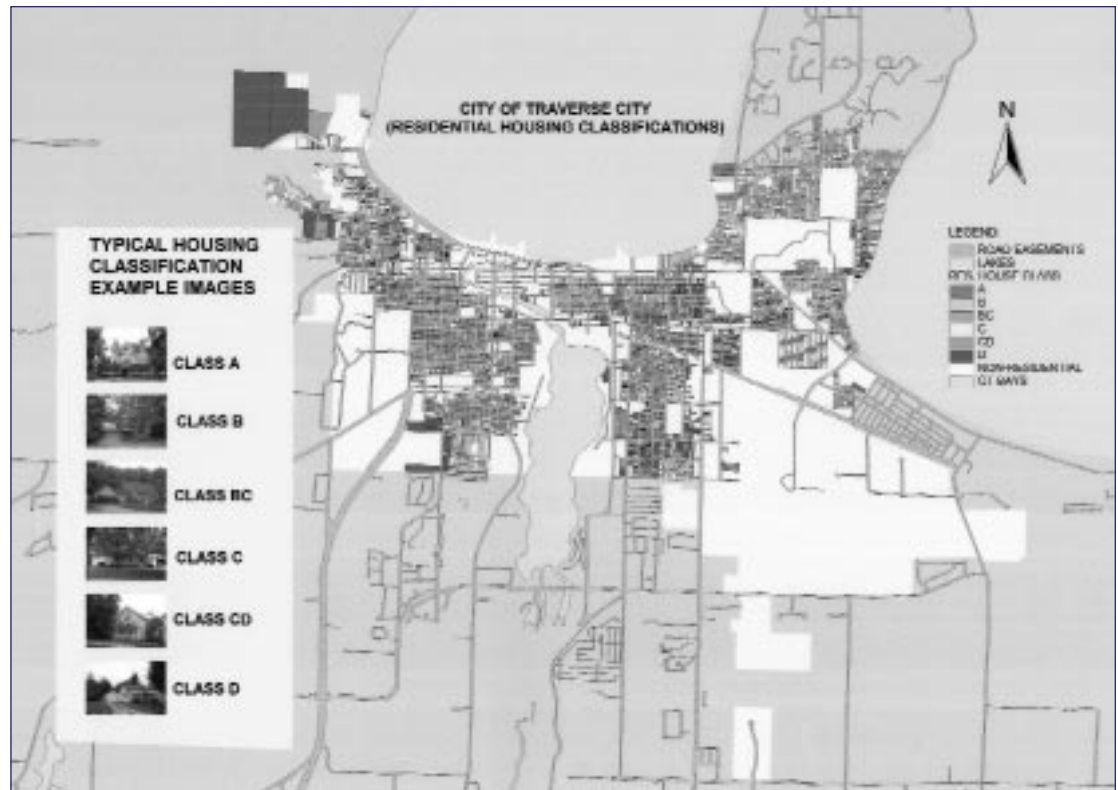


Figure 3. Using GIS for building and land value adjustments.

of land were used in the GIS to clarify questions of income potential. GIS helped establish homogenous area in the City with certainty, making mass appraisals possible.

USE BY OTHERS

Last but not least, the GIS has helped the Assessor's Office get up-to-date information to city administrators, other municipal agencies, departments, and groups, in a clear, easily understandable form, making it a very valuable tool for the City as a whole as well as for the Assessor's office.

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IMAGIN is a nonprofit 501(c)3 organization comprised of individuals and organizations interested in the use and application of geographic information system (GIS) technology in Michigan. Our members are committed to improving the quality and availability of digital data necessary to make good use of GIS. We believe that cooperation and open communication are necessary to achieve these objectives.

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