

Carroll Integrates GIS into Overall IT to Improve Productivity

In the past few years, advances in technology and the development of geographic information systems (GIS) have expanded the potential to organize asset information and to share it among multiple users in multiple ways.

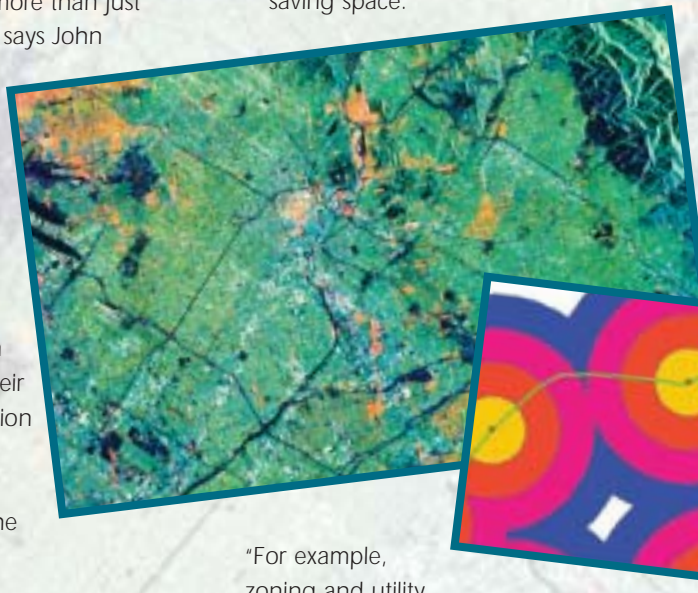
"GIS can be viewed as more than just map-creation software," says John Daukshus, project manager with Carroll Engineering's GIS Department. "By merging it with an information technology infrastructure, private industry, authorities and government entities can streamline virtually all their operations. The integration of the systems creates advantages that are, as they say, greater than the sum of the parts."

For Carroll Engineering's clients in both the private and public sectors, integrating GIS with IT arranges all of the available data and enables users to depict it graphically on a map and in reports, graphs and charts. The fully integrated system

- centralizes databases into one source
- ties data and documents to a geographic location

During the last year, CEC became an Authorized Business Partner with ESRI (Environmental System Research Institute), the leading provider of GIS software on the market today.

- standardizes data entry to eliminate common mistakes
- reduces redundancy of data and data entry
- enables cross-departmental data sharing and multiple use of the same data source
- eliminates current paper filing system, saving space.



"For example, zoning and utility departments' staff members can be working with similar data but in different programs," says Daukshus. "They enter changes or additions, and that requires extra time to keep the information in all programs accurate and up-to-date."


We can eliminate the redundancy and correct mistakes, while enabling all departments to share the data of the municipality or business."

Data can be tied to a geographic feature or factor as a locator, such as an address or tax parcel number. This is especially helpful for municipalities and authorities

where the bulk of services, responsibilities and billing are inherently based on its "clients'" geographic disposition.

Carroll Engineering has developed a strategy to best accomplish the clients needs.

1. Examine the current operation.
 - What are each departments responsibilities?
 - How do the staff members handle and manage data?
 - What do they want to accomplish... or make better?
 - What type of data and documents are currently stored by each department?
2. Design a centralized database for all information to be stored and utilized by the whole organization, not just one department.
3. Create a methodology, with procedures to standardize it across the organization and avoid redundancy and errors.
4. Organize and design the system.
 - Produce custom applications that intertwine data management and GIS to fit the individual needs of the organization.
 - Consider where to customize applications to the organization and for each department that will interact and function together.

"Some municipalities and private businesses don't have a lot of money to spend on fancy custom systems they may not be able to use to the fullest," Daukshus acknowledges. "Our philosophy is to provide an IT solution that fits clients' needs." 

From My Chair




Harry J. Barford Jr., PE

I'm pleased to announce the promotion of four of our valued employees to various positions of leadership within the company. Each has demonstrated abundant leadership and communication skills, knowledge and experience to make them deserving of the responsibilities they now shoulder.

Allen Mason, PE, and Paul Cardie, PE, have been named managers of the Authority/Environmental and Structural Departments, respectively. These changes allow Ken Heydt, PE, and Tom Gockowski, PE, executive vice presidents, to focus on other corporate duties.

Craig Kennard, PE, is now assistant manager of the Municipal Department, freeing Russ Dunlevy, PE, senior vice president and marketing manager, to concentrate on developing the Coatesville, Chester County, office and his marketing responsibilities.

Adam Supplee, RLA, AICP, and current president of the Pennsylvania Chapter of Landscape Architects, will spearhead our planning and site design efforts out of the Collegeville, Montgomery County, office. Ken Yerger, PE, vice president, remains the corporate officer in charge at that location.

We are excited about the direction and future of Carroll Engineering, and we look forward to the contributions Allen, Paul, Craig and Adam will make to our continuing success. Their dedicated service to the company and to our clients is greatly valued. 

Patrons, Businesses Benefit from Phoenixville Renovation

Growing businesses near Mill Street in Phoenixville, Pa.—along with their clientele—are getting a boost with a newly completed reconstruction project.

"Mill Street, which runs between the recently renovated Foundry Building and historic Nailers Row, was completely redesigned and reconstructed," says Adam Supplee, RLA, AICP, project manager for CEC.


"The new Mill Street was realigned away from the existing sidewalk, creating a green planting strip in front of the homes. The new street now connects directly to Main Street without running through a parking lot. Other improvements include ornamental streetlights and an inset curb line for on-street parking.

"Also included in the project was the expansion and renovation of the parking

lot at the corner of Main and Mill Streets. This lot helps accommodate the parking demand caused by the recent revival of many businesses along the historic

Bridge Street shopping, dining and entertainment corridor."

Carroll Engineering, working closely with Phoenixville Borough to provide a design that will benefit everyone, was responsible for design, bidding and construction administration. Melchiorre Construction, Berwyn, Pa., provided site construction, while L.J. McConnell Electric, Aston, Pa., was responsible for the street light installations.

The majority of the funding for this project was provided by a grant from the Chester County Department of Community Development. The complete project includes over 580 feet of new roadway, 75 parking spaces and 27 shade trees. 



BEFORE




AFTER

Workforce Development Summit Held in June

The 2004 Bucks County Workforce Development Summit, for which Carroll Engineering contributed financial support and hosted an informational booth, was held June 9 at Bucks County Community College in Newtown, Pa. Governor Ed Rendell, the invited keynote speaker, unfortunately could not appear.

Besides a review of the strategic plan for the Workforce Investment Board—the

sponsoring agency—the days program included panel discussions on youth in the workforce, healthcare issues, diversity in the workplace, literacy and behavioral skills, and issues pertaining to workforce expansion.

The summit encouraged discussion among business, education and county agencies of the need to promote employment growth within Bucks County. 



CEC Sponsors Exelon Golf

The 6th Annual Exelon Invitational, held June 7 at Hartefeld National in Avondale, Chester County, Pa., was hosted by Carroll Engineering's partner-in-design, 2003 U.S. Open Champion Jim Furyk. This is the firm's fourth year as a corporate sponsor for the event, which raises money for the Philadelphia Girls and Boys Clubs. Shown with Jim Furyk is Greg Mellett, right, Carroll's director of golf services

Carroll's Traffic Engineer Speaks to Engineering Class

In April Jeff L'Amoreaux, PE, addressed students in the transportation engineering class at the University of Delaware. He spoke about engineering and ethical responsibilities, advising the future engineers on some of the finer points of professional and career decision-making.

Shinya Kikuchi, PhD, PE, who was L'Amoreaux's professor when he attended Delaware, arranged for the Carroll



Engineering vice president to visit the class. "Nothing is more satisfying than to see former students leading a successful career and coming back and sharing their experiences and wisdom with us," Dr. Kikuchi noted.

Tapping Fees Deadline

In other legislation, any authority or municipality that levies tapping fees must comply with Act 57 beginning June 30, 2005. This changes the way tapping fees—assessed on landowners who connect to municipal water and sewer systems—are calculated.

Future Biomedical Engineer Wins CEC Scholarship



This year's Central Bucks Chamber of Commerce Engineering Scholarship goes to a student who hopes to parlay her math and

science strengths into developing medical equipment to help make a difference in patients' lives.

Carroll Engineering, annual sponsor of the Chamber scholarship, congratulates Samantha Muro of Warrington, Pa., a 2004 Central Bucks West High School graduate. This fall Sam begins her studies at The Catholic University of America in Washington, DC, majoring in biomedical engineering. She became aware during her own treatment for scoliosis a few years ago that biomedical engineering is responsible for a range of devices used in the treatment of illness and injury.

"Everything from the x-ray equipment to the brace they used to help prevent my scoliosis from getting worse had to be designed by an engineer," she noted on her application. "I have been inspired by different designs, including the creation of a synthetic wafer that carries chemotherapy directly to the brain to target tumors [in cancer patients] and a microchip that dispenses medications through the bloodstream."

Samantha is the daughter of Robert and Cheryl Muro, and she has two younger sisters, Kimberly and Emily. Besides her studies, field hockey and track, Sam is involved in volunteer work and photography. She has also participated in the British Exchange Program and other travel opportunities.

New Horsham Library Opens This Fall

On Sunday, November 7, the residents and officials of Horsham Township will have something very special to celebrate. That day the new Horsham Library officially opens to great excitement and fanfare. It will showcase not only a good-looking, multi-functional community space but also a host of the latest best management practices for stormwater management and exterior lighting.

"We went out of our way with regard to the latest BMPs for stormwater management," says Mike McGee, Horsham Township manager.

Carroll Engineering's Adam Supplee, RLA, AICP, has been responsible for the project's site design. He took an innovative approach to stormwater management and site lighting. A forebay detention basin will filter out sedimentation and unwanted nutrients from road salt and fertilizers so cleaner stormwater seeps into the ground to the aquifer.

"Similarly, bioswales—depressed vegetated areas—instead of curbed planter islands in the parking lots will capture stormwater, and the plantings will filter out toxins and sediment and help infiltrate water into the aquifer," says Supplee.

"This type of site design is the next generation


of stormwater management, providing water quality benefits in addition to the standard flood mitigation of traditional systems."



Something for Everyone

The 25,000-square-foot, one-story, fully handicapped-accessible facility is situated on ten acres next to Simmons Elementary School on Babylon Road. One large room holding up to 200 people can be divided into three smaller meeting or activity rooms. "It's pretty darn nice," says McGee. "The children's 'story tale place' activity room has a circular clerestory in the roof with colored glass panels that provide a changing display of light. A young adults section is set off from the main library, giving young people a space of their own."

There's also a café where patrons can get a beverage to sip while they're reading—something you won't find in most county libraries.

Laurie Tynan, MLS, the new library director, will oversee a staff of four full-time professionals and several part-time personnel. Part of the Montgomery County and Pennsylvania library systems, the library will hold 60,000 books, reference materials, periodicals, CDs and DVDs. For more information, contact the library director at 215.643.3131. 




Legislature Hammers Out Update to New UCC

Pennsylvania's Uniform Construction Code (UCC) took effect in every municipality on April 9. Three months later—a week after the July 8 deadline for all 2,566 municipalities across the state to "opt in" or "opt out" of administering or enforcing the code—Act 93 amended it.

The UCC replaces all existing municipal building codes regardless of whether individual municipalities "opt in," "opt out" or do nothing. The code creates uniform construction requirements—in addition to making

them more restrictive to better meet safety concerns.

The changes in Act 93 were enacted to better define or explain terms in the code, exempt specific structures and make certain aspects of the code less restrictive.

The most prominent change, according to the Department of Labor & Industry web site, is that Act 93 "excludes all residential alterations under section 104 if there are no structural or egress changes," while allowing municipalities to enact ordinances requiring permits for such work in some instances. 

Carroll Engineering Corporation

Seeks professionals to fill staffing vacancies at all three offices:

Warrington, Bucks County
Collegeville, Montgomery County
Coatesville, Chester County

Please send your resumé to the attention of Daniel P. Mullin, RLA, Vice President
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Visit us at: www.carrollengineering.com