

From the President's desk...

Future Focus — Through a New Lens

At the shareholders meeting last fall, I discussed the importance of rebuilding the photogrammetry department for our future success. In the last year we have seen an increasing number of requests for proposals (RFP's) for GIS projects that contain specifications for aerial and photogrammetric equipment that we didn't possess. Too many times we have been faced with the challenge of finding another firm to work with us, which usually means sharing a good portion of the work with them and being less cost competitive, or being forced to decline the invitation to respond.

We have taken several steps in the last 18 months to turn this situation around. Our purchase of the Zeiss P-33 analytic stereoplotter, the Z-2 orthophoto instrument, and most recently the addition of digital orthophoto hardware and software have been positive steps to improve our competitive position. The one missing piece of equipment to allow us to compete at all levels was an aerial camera with the resolution and features necessary to meet standard RFP specifications.

These specifications usually require a precision camera with an AWAR rating of at least 75 to 85 and equipped with FMC. Occasionally the specifications also require GPS configuration and gyro-stabilized mounts. What does all this stuff mean? I'll go into detail shortly, but the simplest explanation is it means our cameras weren't good enough and we wouldn't get much new work with them.

AWAR is an acronym that stands for *average weighted area resolution*. It is a measurement of the resolution of the camera lens and indicates the level of precision and how fine an image detail it can record. Over the last couple of years, new aerial cameras have been hitting the market with an AWAR rating in the low 90s. By comparison, our best aerial camera had an AWAR rating of 56 or 57. FMC stands for *forward image motion compensation*. FMC is a device built into the film magazine that moves the film ever so slightly to compensate for the forward movement of the aircraft when the picture is taken. GPS stands for *global positioning satellite* system and is used for navigation and surveying. In an airplane, a GPS receiver is connected to the navigation system and the camera. It can control the flight path of the airplane and record the X, Y and Z coordinates of the camera's position for each photographic exposure. A gyro-stabilized mount is the mounting device in the belly of the airplane to which the camera is attached. Gyro-stabilization is a motorized continuous adjustment of the camera to keep it level as the airplane is in motion.

I thought these technical details might be helpful in light of this important news: on August 1, Rich Chandler and Graham Dell flew to Washington to pick up a new RMK-TOP 15 aerial camera system equipped with FMC, which we purchased from Zeiss. While we are not purchasing GPS equipment or gyro-stabilized mounts at this time, these are features that can be added at any time in the future. What is exceptionally unique about this camera is that it has an AWAR of 112. That is the highest resolution ever measured by the USGS and, according

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DID YOU KNOW...

On a recent visit to the courthouse in Madison County, Iowa, Mark Dupree was mistaken for Iowa Governor Terry Brandstadt?

Employee Profile

Shifting Gears

If you asked Steve Thordarson to take the path of least resistance, he undoubtedly would take the bicycle path, as would several members of the Thordarson family. Steve is the oldest of 10 children, most of whom cycle. At the age of 62, Steve's mother rode her bike from Chicago to Boston to visit her son Paul. Steve's own two children, 15-year-old Erik and 16-year-old Julie both ride. And to research his family's Icelandic roots, in 1983, Steve went to Iceland...and took his bike.

That same year, Steve began competitive racing and joined the Blue Horizon Wheelman "Pepsi Cycle" Team. In 1985, he began coaching and is now a licensed United States Cycling Federation Olympic Coach. The Blue Horizon team consists of 17 children and 23 adults, ranging in age from five to 53. "[Competitive cycling] is

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Milestones

The following Sidwell employees are celebrating significant service anniversaries this fall (September - November):

10 Year

Mark Dupree
Alysa Hwalisz

25 Year


Tim Hopkins
Mike Tesch

Congratulations to each of you as well as those employees celebrating anniversaries in other increments of time!

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to them, this is the highest resolution commercial aerial camera in the world.


I am very excited about the acquisition of this equipment. By purchasing this camera, we certainly inherit some "bragging rights" throughout the industry, but that is secondary to the impact it should have on our business. This is another important step to reinforce our image as a progressive leader in the mapping industry offering the full range of GIS and photogrammetric mapping services to our clients. It allows us to be more independent, technically competitive and cost competitive in what is a rapidly growing high-tech discipline. If you want to know more about this camera, stop by and see Bob Nelson or Gary Lobdell in the Aerial Services Department. If for no other reason, you don't want to miss this rare chance to see Bob Nelson smile!



Calling All Ghosts...

(and ghouls, goblins and various assorted other scary creatures...)

Halloween 1995 is almost upon us! Costumes have been approved again for this year, so have fun, be creative (and in good taste, please!) Participation is optional, but the more people that join in, the more fun we'll have! Remember: Tuesday, October 31—prepare to see your fellow employees in a whole new light!



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the hardest thing they have ever done in their lives," notes Steve. "You have to train nine to 10 months a year. It requires heart rate training, lactate tolerance training and endurance training. It takes about three years to see what you are capable of doing because it takes that long for your body to develop endurance." The hard work has paid off for Blue Horizon, as they won nine gold, eight silver and twelve bronze medals in state competition this year. Two team cyclists broke state records.

Along with coaching, Steve also repairs the team's bikes, builds wheels, chauffeurs cyclists to races, and even lends cyclists his bike if they do not have one. The last three seasons, Steve has given up his bike to team member cyclists with successful results. Marisa VandeVelde of Lemont placed 10th in time trials for a world competition race held this past August in Italy. Another cyclist became district champion on Steve's bike.


At the turn of the century, cycling was the biggest sport in the United States, according to Steve. Madison Square Garden, in fact, was built for competitive cycling events. Concerned about fewer and fewer kids taking up the sport today, Steve developed a school program teaching helmet and bicycle safety as well as rules of the road and how to ride without getting hit. "Cars do not have any regard for bicycles," says Steve. "To make the assumption that drivers will be on guard is erroneous." Because injury is always a risk, the issue of liability was a concern. So the program became affiliated with the United States Cycling Federation, and under their umbrella the cyclists are insured. "If you don't have parents and teachers involved, you aren't going to get anywhere," continues Steve. "It took a lot of work and a huge amount of time to iron out all the bugs and develop a training program." The participants in last year's program ranged from third to seventh grade in age. One particular outing for the group was a trip to Dairy Queen. "They had to learn to read a map and map out the safest route to Dairy Queen," explains Steve.

As if the school program and the cycling team didn't keep Steve busy enough, last January he was one of 42 coaches worldwide invited to a symposium in Colorado Springs. Because of interest in his school program, he was asked to address the delegation about it. "They really liked the program and plan on using it as a model," he says. Steve may also be coaching at the 1996 Summer Olympics in Atlanta. While most other coaches charge in the neighborhood of \$200 or more per month for their tutelage, Steve does it for free. It's his passion for the sport that keeps him involved. "It's a lot of fun to work with these kids and see them reach their potential. That's the important thing."

From the Office of the Treasurer:

Our revised Sick/Emergency Leave Policy has proven to be a success in its first year! The program has lived up to our expectations by reducing the amount of sick time used by 54%, thereby increasing both the productivity and efficiency of our company.

For the fiscal year ended September, 1995, a total of 15 non-exempt (hourly) employees achieved perfect attendance and 23 others used less than 40 hours of sick time. Congratulations to you all for making this policy a success!



Northeastern Illinois Special Olympics is gearing up for its 4th Annual Pumpkin Pedal bike ride, Sunday, Oct. 15, 1995, beginning in Geneva.

The fund raiser offers rides to suit all cyclists with distances of 10, 20, 40 and 62 miles. The 10-mile ride begins at Leroy Oaks Forest Preserve and remains on bike paths. All other rides begin and end at Delnor-Community Hospital in Geneva.

Pre-register by Oct. 9, and receive a t-shirt, a goody bag and a pumpkin. The pre-registered cost is \$15 for individuals or \$35 per family. All participants can enjoy lunch catered by the Olive Garden at Delnor-Community Hospital following the ride.

So as you enjoy a nice fall Sunday, pedal for a purpose by riding in Northeastern Illinois' 4th Annual Pumpkin Pedal.

Northeastern Illinois Special Olympics services DuPage, Kane, Kendall, Lake and McHenry Counties. If you would like to sponsor a cyclist, call 708-377-7250.

Heads Up Map Makers! Digital Orthophotography is Here!

As many at Sidwell are by now aware, the company has recently added digital orthophoto mapping to its range of services. The operations necessary to create digital orthophotography from aerial photography are performed in our photogrammetry department. Gearing up for this activity required the company to purchase a "softcopy" stereoplottor and accompanying software.

A digital orthophoto is a processed aerial photo image that can be interactively viewed on a computer, manipulated electronically, and plotted to hard copy. In a GIS environment, digital orthophoto technology allows computerized maps to be superimposed over photographs on screen. Photographic details not included in the maps can be viewed in the geographic context of the maps, and used to support decision making activities. A digital orthophoto originates with a conventional aerial photo image which is then subjected to computer processing for scanning, orientation, and differential rectification operations. Digital orthophoto images can be viewed individually or in groups, mosaicked together, and can be output to hard copy in a variety of formats and scales for use in the field.

According to Gary Lobdell, photogrammetry supervisor, digital orthophotography offers advantages over conventional photography in mapping applications. "Previously, CAD [computer-aided design] files containing vector information could be viewed on a monitor, while the aerial image could be viewed in hard-copy version only and was limited to the published scale. CAD files are sharable electronically but photographs are not. Since conventional photographs cannot be viewed superimposed onto vector files, feature comparison is tedious and prone to error," he explains.

"With digital orthophotography the user can have the aerial image at his or her fingertips along with other GIS application data, such as cadastral, planimetric or topographic data," Gary adds. "The user can view information in any combination desired and at a variety of scales superimposed over the image. The in-

formation can be shared by users in different locations at the same time. Additionally, the scale of photography and the image scan width can be determined up front to achieve a resolution that can support the level of detail required by the end user."

This new technology will afford significant benefits to those who perform the task of map compilation. Aerial interpretation capabilities will be enhanced, and mapmakers will be presented with the ability to perform true 'heads-up' digitizing for the first time. Quite a change from the days of drawing maps via pencil sheets and Graphos pens!

Aerial Reflight Contract Signs

Benton County, Iowa, a Sidwell maintenance client since 1981, recently signed a contract for new aerial photography. Flight work on this project will commence in Spring 1996.

"The county is very excited at the prospect of acquiring their new aerials," says Mark Dupree, who is responsible for bringing in this contract. "Their current aerials are from 1979, and updated photography will be very useful to them." Congratulations and thanks to Mark, for acquiring this new work for us!

In the Dog-House



In this edition of our newsletter, we'll get to know Sidwellian canine friends. Future issues will feature feline family members, as well as other exotic and unique pets of Sidwell employees. All employees interested in sharing pictures of their pets are encouraged to post them on the

"Play" bulletin board in the lunchroom.

<u>Employee</u>	<u>Dog Breed</u>	<u>Dog Name</u>
Doug C.	Beagle/English Setter Mix	(Jessica Mae) Jessie
Don D.	Yellow Lab	Sam
Karen F.	German Shorthair Pointer	Peg
Chris F.	Maltese/Poodle	Coco
Tim H.	Afghan	Candy
Alysa H.	Basset/Lab Mix	Buster
Donna J.	Rottweiler	Hoss
Marv K.	Sheltie Terrier	Heather
Kevin K.	Yellow Lab	Brandi
	Australian Shepherd	Harley
Jim L.	Doberman	Mick
Gary L.	Cairn Terrier	Cooper
Rosie M.	Malamute	Stephanie
	Sheltie	Amy
Jerry M.	English Springer Spaniel	(Reginald Dwight) Reg
Arlette M.	Newfoundland	Buddy
Carol M.	Sheltie	Shelisa
Karen Q.	Dalmation	(Princess Polka) Dot
Laurie R.	Jack Russell Terrier	Baxter
Bob S.	Wheaton Terrier (Soft Coat)	Kami
	Mini Schnauzer	Geo
Sue T.	Boxer	Baron
Mike T.	Cocker/Black Lab Mix	Harley
Steve T.	Border Collie/Husky Mix	Rover
Dan T.	Westie	Spencer
	Scottie	Kelsey



Sidwell Picnic 1995: Another Success!

The 1995 company picnic was held on August 26, 1995.

The duties of each committee were well organized this year, and the planning and execution of future picnics should go more smoothly as a result.

Thanks to all those who worked so hard to make this year's picnic a success. Special thanks to Kevin Koehler for his groundskeeping efforts prior to the picnic: the results were spectacular! Thanks, Kevin!



New Employees



Recent additions to the Sidwell staff include:

Doug Cain — Technical Support
Mick Cseri — Customer Engineering
Mike Thomas — Conversion Department
Graham Dell — Compilation II

If you haven't done so already, please take a moment to welcome these new employees to our company!



Santa Claus Is Comin'...

It may be too early to be thinking about the Christmas holidays already, but not if you want to play Santa! Claus and Effect, a charitable organization based in Barrington, IL., is looking for people to play Santa for Christmas 1995.

The organization works with various homeless shelters, day-

care and youth centers in the greater Chicagoland area to identify needy individuals and families.

Adults—as well as children—write to Santa in the hopes that a bit of good fortune will come their way during the holiday season. Through coordinators at each facility, these letters are passed on to Claus and Effect, who then pairs a letter up with a volunteer Santa. As a volunteer Santa, your responsibility is to fulfill at least one wish from the letter that you receive. You may do so anonymously, or you may play Santa in person if you would like. If you want to participate in this year's program, please write to:

Claus & Effect
P.O. Box 8121
Bartlett, IL. 60103

Please enclose a self-addressed, stamped envelope, and a note indicating that you would like to participate in the program. If you have a preference on the type of letter you would like to receive—from adult, boy, girl or entire family—please include that in your note. Claus & Effect will do their best to match you up with the letter of your preference.

Customer Engineering Update: 1996 Users Conferences Planning Underway

The Customer Engineers met recently to outline preliminary plans for the 1996 Users Conferences. This year's meetings will be held in Des Moines, IA. on Tuesday, January 16, and in Bloomington, IL. on Tuesday, January 23.

Topics and employee presenters scheduled for this year include:

Intro. to Sidwell Maps—Wilma Aquavia
Basic/Intermediate Legal Descriptions—Mark Dupree & Karen Fouts
Advanced Drafting—Randy Kobiella & Carol Miller
Problem Subdivisions—Don Dieckmann
Aerial Photography—Marv Knopp
GIS Map Maintenance Techniques—Scott DeHainaut
GIS Technical Track—Mick Cseri, Scott DeHainaut & Brent Mainzinger

This year's conferences will also include presentations by several outside vendors: Vanguard, an appraisal software firm from Iowa, and Bentley Systems, an industry leader in MicroStation and CAD development. Vanguard's presentation will focus on the potential for integrating their appraisal software package with a Sidwell GIS mapping system. The presentation offered by Bentley Systems will feature GeoGraphics, the latest in GIS application products from Bentley Systems.

Preparations for these conferences promise to reach a fevered pitch as the new year approaches. If you're curious and would like to know more about the Users Conferences, stop by and see Senior Customer Engineer Mark Dupree.