

THE American Surveyor

A FOOT IN THE

TO THE FUTURE

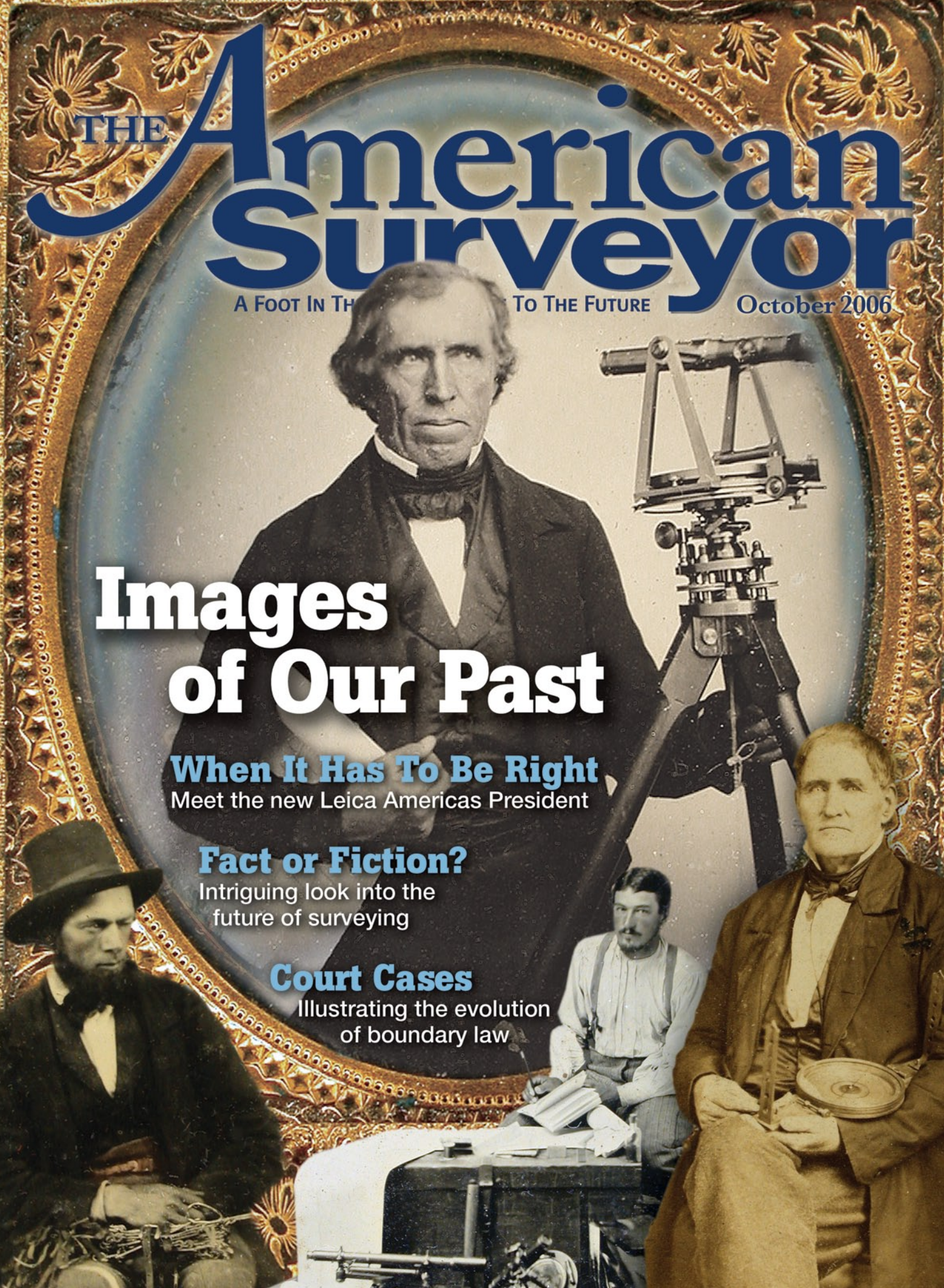
October 2006

Images of Our Past

When It Has To Be Right
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Leica Geosystems
Americas President
Bob Williams

WHEN IT HAS TO BE RIGHT

New President Positions Leica Geosystems for the Future

Many of today's surveyors cut their teeth on equipment from Wild-Heerbrugg, forerunner of Leica Geosystems. We recently visited Leica Geosystems' beautiful new Atlanta headquarters to learn more about new developments at the equipment giant.

We interviewed Bob Williams, President of Leica Geosystems' Americas operations. It was good to meet him in person, as he is a bit of an enigma; *TAS* gets around in the survey industry, but we had never met or even seen him. We asked him about it. Williams smiled and told us that he intentionally keeps a low profile to preserve the advantage of anonymity. Since his appearance is not well known, he's able to circulate freely and hear straight talk about Leica Geosystems and the survey industry, without the information being filtered in deference to his position.

Williams is himself a sign of change at Leica Geosystems in North and South America. Until his appointment in November of 2003, Leica Geosystems Americas presidents had been from the company's European operations. But the company realized that surveying in particular, and the market in general, is different in the Americas and that a



Showroom in Leica Geosystems Atlanta headquarters.

president with an American background was needed. Midwest-born Williams fit the bill, and he also has a wide and deep background in business.

Williams began his career after getting out of the Army. He was newly married, starting a family (he now has two daughters) and he was assisted by GI bill funding while attending the University of Kansas in Lawrence and obtaining a degree in Business Administration with a minor in Industrial Management. While

in school he worked for British Oxygen Corporation (BOC) – a world leader in industrial gases – and developed an affinity for industrial processes.

After graduation, Williams continued to work full time for BOC. He describes his decision to move from plant management into sales and marketing by describing a revelation he had one Christmas Day, while working at a BOC plant in Ohio. He found himself 100 feet in the air, during a blizzard, attempting to free

>> By Marc Cheves, LS

a stuck valve. He really needed to talk to his controls salesperson, but couldn't reach him as, of course, it was Christmas Day. That was the *exact* moment he decided he was going into sales because he wanted to be that person that no one could find on Christmas Day!

After 13 years with BOC, Williams spent another 13 with Siemens, the multi-national electronics corporation. It was the experience with distribution leadership and management he gained at Siemens that complemented the Leica Geosystems' business model in the Americas region. After Siemens, Williams moved to Invensys, a British engineering conglomerate. There he was focused on the commercial and residential marketplace with supply-side and demand-side energy management solutions. What he experienced at Invensys that translated well to his position at Leica Geosystems is the complexity and importance of software, and the management of data-acquisition, processing, analyzing, and making decisions, all based on data. Williams says much of what he relies on daily is the valuable knowledge he gained when opening and commissioning industrial plants.

Williams spent his first three to four months at Leica Geosystems learning about surveying and measurement, an industry that was new to him. A former Eagle Scout, he had to laugh when he was given the Boy Scout Surveying Merit Badge Manual as a primer. But he did get up to speed by asking three questions that have served him well throughout his career: 1) What drives our customers? 2) What makes them competitive? 3) What causes them to make more money?

During this time of inquiry, he simply kept asking challenging questions of everyone he met regarding the industry



Bob Williams with Leica's System 1200.

and their jobs until he reached the limit of their knowledge.

After this period Williams realized that changes would be needed to reposition Leica Geosystems in the marketplace. This started with the successful launch of Leica Geosystems' System 1200 in February of 2004. It was a new direction for the company, and it seemed appropriate to launch this new system in a fresh way. The company already benefitted from its outstanding technical reputation, and its world headquarters at Heerbrugg was considered something of a Mecca for those who make their living measuring land. (Having visited the factory ourselves, we can attest that the factory tour is an amazing look at the creation of precision instruments.)

We next spoke with Williams about drivers of the business. When Williams

joined Leica Geosystems, the economy had rebounded from 9/11 and was doing well; residential and light commercial building were particularly strong. The times were good for all the equipment manufacturers. But after he had been on the job six months he was asked, "What do you think of Leica Geosystems' prospects?" He responded that the company needed to be looking further down the road. Williams knew that the company was profitable, and that Swiss precision was still a very marketable commodity, but he was also keenly aware that Leica Geosystems once had 60% market share in the survey industry and the marketplace would only get more competitive.

Today, in 2006, there are signs that the surveyor's traditional bread and butter – residential and light commercial



development – is softening and the cyclical nature of surveying is always a concern.

We asked Williams what he thought about prospects for surveyors over the next several years. His response was heartening. Basically, Williams believes (and he's not alone) that the "next big thing" for surveyors will be the rebuilding of our nation's crumbling infrastructure. Consider some facts and figures:

Thirty of America's largest cities are on water, either on the coast or on large inland waterways; this creates special maintenance issues, particularly the need to handle stormwater adequately. Also,

as was learned the hard way in New Orleans, the monitoring and maintenance of levees and dams are critical.

In 1956, when President Eisenhower initiated the Interstate Highway System, there were around 50 million registered vehicles in the United States, approximately nine million of which were trucks. Today there are more than 240 million registered vehicles, 95 million of which are trucks. In addition, many portions of the 50-year-old US interstate system were designed to last only 20 years. The highway system, designed for lighter and easier loads, is barely keeping up. (See sidebar on page 30.)

In the 2005 ASCE Report Card for America's Infrastructure (see sidebar on page 31.), America received a D, down from a D+ in 2001. And it's estimated that it would take an investment of \$1.3 trillion just to get to a C. Highways are undersized and bridges are crumbling, and these two items represent only two of the 14 items on the Report Card. This sounds ominous, and it is, but the opportunities for engineers and surveyors are tremendous and will remain so for a decade or more.

Providing yet more examples, Williams pointed out that many cities have a combined sewer overflow (CSO) problem that will require investment. Chicago, for example, has worked for decades on a massive underground storage system to contain storm events and prevent overflow into Lake Michigan. He also pointed that the latest highway bill funded \$260 billion of highway construction, a figure that doesn't even include the costs of Hurricane Katrina reconstruction.

In Williams' estimation, infrastructure expansion and repair will drive the construction economy. Machine control will grow in importance, benefiting companies like Leica Geosystems. Williams also feels that Leica Geosystems, as a world leader in tunneling and monitoring technology, will do well in that arena.



Leica Geosystems' new headquarters building in Atlanta.

The conversation turned to Leica Geosystems' global plans. Investment in Asia is high on the list, as is protection of Leica Geosystems' leading European market share. Europe and North America will be corporate battlegrounds and customer loyalty will be necessary for success. Leica Geosystems will continue to focus on traditional strengths like design and manufacturing and will find other ways to remain competitive. One avenue will come via the ever-increasing importance of data flow; Williams predicts that there will be greater emphasis on two-way digital flow between office and field.

Williams acknowledges that the last four years have been good for Leica Geosystems, with all divisions of the company experiencing double-digit growth per year. The highest growth areas for the company have included seismic surveying and geotechnical activities like subsidence detection and monitoring, both of which are strong suits for Leica Geosystems.

Williams sees the November 2004 Hexagon AB purchase of Leica

Geosystems as a very positive development. Based in Sweden, Hexagon is a \$1.3 billion global giant with strengths in polymers, engineering processes, and measurement technology – this last is where Leica Geosystems fits in.

Since the acquisition, Leica Geosystems is now consolidated into three divisions: Geosystems for surveying, Geospatial Imaging for imaging software, and Measuring Tools for consumer and trade products. Hexagon is continuing investment plans in North and South America by targeting key opportunities in the region.

When asked about laser scanning, Williams said he has no doubt that Asian scanners are coming, and that the market will experience price pressure. He noted that there were several Chinese total station manufacturers at ACSM in Orlando. But he feels the real battle will not be in hardware, but in data processing and modeling software. Leica Geosystems has a head start in these areas, and is the only major manufacturer with both terrestrial and airborne scanners. To sum up, Leica Geosystems' view is that Chinese manufacturers will influence prices, and they will eventually match quality, but they will struggle on data processing and modeling software. Leica Geosystems

will concentrate on data processing and modeling, and the company believes it will be a challenge for Chinese manufacturers to develop effective market channels.

However, Williams does believe that the market will support Asian entry. He is clearly taking Asian equipment seriously; we were a little shocked to see a Chinese total station in his office. He explains, "I wanted to see a \$4,000, bought-with-a-credit-card-delivered-in-two-days total station for myself. It's good to keep challenges visible." Generally, Williams is upbeat about the upcoming market tussle, and says that Leica Geosystems will be meeting it head on. The Leica Geosystems/Hexagon combination is very strong in China with sales in their core markets.

THE INTERSTATE HIGHWAY SYSTEM

2006 marks the 50th anniversary of what has been described as the most important public works project in U.S. history, the Interstate Highway System. Just one segment of our inadequate infrastructure, the system is responsible for sweeping changes in American society. Started by President Eisenhower in 1956, and based on what he had seen of Germany's Autobahn, the 47,000-mile system is responsible for today's car culture and more. It is said that the concrete used could build a wall nine feet thick and 50 feet high around the world.

Several predictions guided the planning, including:

- By the year 2000, every family would have one car.
- 60% of the population would live in cities.
- Freight would be transported by trains.

As we know now, these predictions didn't go far enough. Families have several cars, 90% of Americans live in cities, and the majority of freight is carried by truck. The highway system, designed for easier loads, is barely keeping up. As noted in the accompanying article, predictions in the 1950s have been proven wrong. Real-time inventories and Internet commerce have caused truck traffic to grow by 45 percent in the past decade, and it's projected to grow by another 40 percent over the next 10 years.



The Interstate system was planned for a population of 170 million, mostly east of the Mississippi, not today's population of 300 million with most of the growth having occurred in the South and the West. Nearly half of the top 20 cities by population in the 1950s — towns like Buffalo, Cleveland and St. Louis — have dropped off the list, to be replaced with cities like Las Vegas, Phoenix and San Antonio. It is estimated that traffic congestion costs the country \$63 billion per year in wasted fuel and time. And this is just the highway system, not to mention the bridges, waste water treatment plants, water plants, and the rest of the infrastructure our country depends on.



Wild T-4 in Atlanta showroom.

We asked about the future, and Williams proudly declared that Leica Geosystems will continue to focus on its technological and manufacturing strengths, and will also continue to listen more to the market. Instead of developing products and then finding a market, they will continually strive to develop products based on feedback from end users in North and South America.

We took the opportunity to offer a little feedback of our own, pointing out that Leica Geosystems has sometimes been criticized for a confusing mix of dealers and direct salespeople. Because

of this, customers have sometimes been uncertain about who to call when they were ready to buy.

Williams assured us that Leica Geosystems' new website, controlled for the first time from this side of the Atlantic, has a new dealer/salesperson locator to resolve that issue, and that Spanish and French-Canadian versions of the website are coming soon. We were also impressed to hear of the company's software development center in Montreal, developing applications specific to the North and South America markets.

Williams goes out of his way to learn more about surveying and develop a rapport with customers. He often stops to visit with survey crews and exchange business cards, and encourages them to call direct if they have a problem that is not being resolved. He showed us an impressive connectivity gadget, his voice-over-IP system. No matter where he is in the world, phone calls are routed to his laptop, and he can answer calls via the Internet.

Leica Geosystems' America's President left us with a few words of wisdom, honed by years of experience. To succeed in business:

- 1) Know your customer.
- 2) Know your customer's business.
- 3) Know your competition.
- 4) Know your competitors' product.
- 5) Know your product.

Surveyors and equipment manufacturers are a partnership born of need; each can only succeed if the other succeeds as well. Leica Geosystems has a grand vision for the future, and surveyors can look forward to a lot of good developments coming out of Heerbrugg and Atlanta in years to come. *A*

Marc Cheves is Editor of the magazine.

INFRASTRUCTURE REPORT CARD

Beginning in 1988, and then 1998, and starting in 2001 on alternating years, the American Society of Civil Engineers (ASCE) has issued a Report Card for America's Infrastructure, grading each category. Here are the latest (2005) report and grades:

A 55-page overview of the complete report by category can be viewed at www.asce.org/files/pdf/reportcard/infrastructurebycategory.pdf

2005 Report Card for <u>America's Infrastructure</u>	
CATEGORY	GRADE
Aviation	D+
Bridges	C
Dams	D
Drinking Water	D-
Electric Power Grid	D
Hazardous Waste	D
Navigable Waterways	D
Public Parks & Recreation	C
Roads	D
Schools	D
Security	Incomplete
Solid Waste	C+
Transit	D+
Wastewater	D-