



# *The Florida Surveyor*

*Volume XXVII, Issue 3*

*March 2019*

## **Lost In The Everglades**

**Page 6**

## **In This Issue**

- **Around the State**
- **Did You Ever Wonder Why?**
- **From The Archives**

*A publication of the Florida Surveying and Mapping Society since 1992*

## Topcon GT Robotic Total Stations

Patented, best-in-class robotic prism tracking technology from Topcon rejects false positives and remains locked onto the prism so you can focus on the job at hand. And Topcon's unique Hybrid Technology delivers the ultimate in non-stop productivity by combining GNSS positioning to quickly regain lock, and maintain profit.

**800.342.9238**  
**www.Lengemann.us**

**Topcon  
HiPer VR  
GPS**

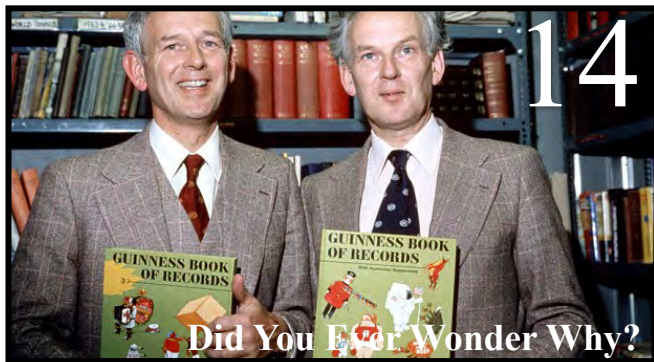


**Lengemann**

**'Flex Lease'**

36 Month Terms - Return Anytime

Call 800.342.9238  
for Details



President's Message | 4

NSRS Modernization News | 5

From The Archives | 16

Education Course Information | 18

Chapter Presidents | 21

Districts and Directors | 22

Committees and Admn. Staff | 23

Sustaining Firms | 24

Additional Information | 26

The Florida Surveyor is an official publication of the Florida Surveying and Mapping Society, Inc. (FSMS) and is published for the purpose of communicating with the membership. The newsletter is financed primarily by the dues of the membership although advertisements are welcome from service and product industries relating to the needs and activities of the profession. Articles and advertising appearing in this publication are not necessarily the official policy of this Society unless specifically stated. FSMS assumes no responsibility for statements expressed in this publication. The Florida Surveyor welcomes contributions from members. Mail correspondence to Administrative Office. Copy all quoted material as it appears in the original. Give credit to the source from which you are quoting. Emailed ads are acceptable. Please send Adobe files, eps, pdf or tif files.

**FSMS  
2019 Officers**



**President-Elect**  
Don Elder  
(850) 444-6255  
donelderpsm@gmail.com



**Vice President**  
Matt LaLuzerne  
(321) 441-5156  
mlaluzerne@gpinet.com



**Secretary**  
Joe Williamson  
(321) 267-7123  
joew.fsms@gmail.com



**Treasurer**  
Bon Dewitt  
(352) 392-6010  
bon@ufl.edu



**Immediate Past  
President**  
Bob Strayer, Jr.,  
(941) 497-1290  
bob@strayersurveying.com

# President's Message



Happy March everyone! I hope you all are having a prosperous beginning to 2019.

In February, I attended FES Legislative Days in Tallahassee along with Bob Strayer, Lou Campanile, and John Clyatt. Prior to heading to the Capitol, we attended the FES Breakfast where we heard speakers Don Polmann, the Public Services Commissioner in Tallahassee, and Rep. Mike La Rosa from the Orlando area. Mr. Polmann spoke about utilities regulation and Rep. La Rosa spoke about the importance of meeting your local legislators in your own local districts. Establishing those relationships is crucial to fighting off challenges to our profession and being able to get necessary changes made to current statutes.

We then went to the Capitol with the engineers and met with several of our district legislators. Of course, this day was mainly for the engineers and their legislative concerns, but as many of you know, many of their concerns are also ours. It was well worth our time to talk directly to the legislators or their staff and get our business cards into their hands.

During this trip, John Clyatt and I were also able to meet our new regulator, Agricultural Commissioner Nikki Fried, at the office of our lobbying firm, Smith, Bryan and Myers. She admitted she knew very little about our profession but seemed genuinely interested in what we do and how we can assist with her agenda. She asked meaningful questions and I was impressed with her authenticity and the ease with which she conducted herself.

John explained a bit of our history, explaining our move from the Department of Business and Professional Regulation to the Department of Agriculture and Consumer Services (FDACS), as well as providing information about what we do as a profession. We took the opportunity to express our gratitude for the staff of FDACS and how much we appreciate our working relationship with Jenna Harper and the Board of Professional Surveyors and Mappers. It was also an opportunity to stress the importance of funding the UF Geomatics program. All in all, it was a very good meeting for us, and it was important for us to meet with her early on in her first term as Commissioner of Agriculture.

Our networking efforts will continue in March, when President-Elect Don Elder and I will attend the Puerto Rican Professional Surveyors Conference in San Juan. We are looking forward to establishing a working relationship with their association and working directly with their Florida Chapter in Orlando.

March 18<sup>th</sup>-24<sup>th</sup> is National Surveyors Week, and I encourage you to participate on your local level. There are numerous opportunities to get proclamations from your City and County Commissions, as well as participate in presentation programs at your local schools. On March 12th, I will be attending the Florida Cabinet meeting with Don and Executive Director Tom Steckler to receive the surveying proclamation for the State of Florida. Surveyors Week is an excellent time we have each year to focus on getting the word out about our great profession. But remember - educating the public and enticing new recruits to join our profession should be a full time job for all of us.

I'll keep talking every month about our 64th Annual Conference in Orlando. Vice President Matt LaLuzerne, along with Broward Chapter President Earl Soeder and several others, are working hard to make this another great conference. The Caribe Royale is a beautiful venue, and we have some excellent educational opportunities, which again will feature nationally recognized speakers. In addition, we plan to make a couple of changes to marquee events that should prove to be exciting. I encourage you to support our conference both by becoming a sponsor and attending this year's events in July in Orlando.

“Coming together is a beginning; Keeping together is progress; Working together is success.”

-Henry Ford

Dianne Collins  
(863) 937-9052

dcollins@collinssurvey.com



# NSRS Modernization News

For all issues of **NSRS Modernization News**, visit:  
[geodesy.noaa.gov/datums/newdatums/TrackOurProgress.shtml](http://geodesy.noaa.gov/datums/newdatums/TrackOurProgress.shtml)

## Geospatial Summit 2019

The next Geospatial Summit about NSRS Modernization will take place May 6-7, 2019 in Silver Spring, MD. Mark your calendars and check the [2019 NGS Geospatial Summit](#) page for more information when it becomes available.

## Shutdown Impacts

The 35 day partial shutdown of the government included the Department of Commerce and subsequently the National Geodetic Survey. The potential damage caused to the already tight schedule of the NSRS Modernization effort is not yet fully known. However, some immediate impacts can be stated definitively:

1. The long-awaited GRAV-D airborne gravity survey of the Pacific islands (Hawaii, Guam, CNMI and American Samoa) was scheduled to begin in early January, and run through March. Existing commitments of the aircraft mean that the entirety of that survey cannot be completed before March. The survey is now scheduled to begin in Hawaii in early February, then move to American Samoa, barring weather, maintenance or further shutdowns. The Guam and CNMI portions of the survey will be put off for a future date.
2. The significance of this delay should not be underestimated. The GRAV-D schedule is effectively the “long pole in the tent”. Getting the modernized NSRS out, even in late 2022, depends upon mitigating any significant or unforeseen delays in GRAV-D. 2022 remains the official completion and rollout date, although the schedule is now questionable.

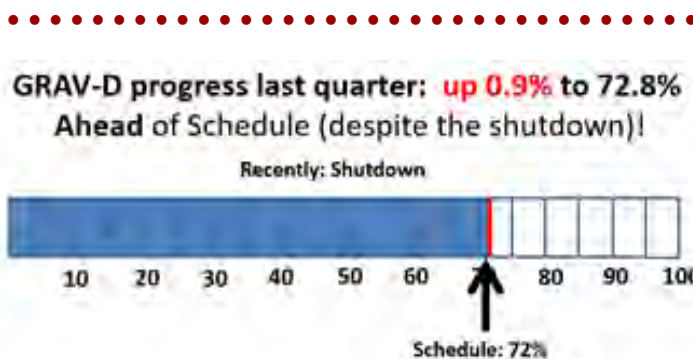
3. *The Blueprint for 2022, Part 3: Working in the modernized NSRS* document is now tentatively scheduled for release prior to the Geospatial Summit in May, despite the disruption to the writing and editing process. Still, the importance of this document to the NGS communications plan puts its release as a top priority under the modernization efforts.

## Progress in Ongoing Projects

There are currently 18 ongoing projects directly related to NSRS modernization around NGS. Here are highlights from a select few:

- **Comprehensive Toolkit Improvements**  
Project Manager: Dr. Dru Smith (*Acting*)

It is NGS’s intention that NCAT and VDatum eventually be able to perform all transformation and conversion functions that currently reside as separate tools in the NGS Toolkit. A complete diagram of that functionality has been completed and provided to both the NCAT and VDatum teams in order to assist in this effort. Look for updates to NGS Toolkit over the coming months.





# Lost In The Everglades

by Earl DeHart

(Editor's Note: This article was recommended for our readers by Bob Harris.)

**O**n Feb. 10, 1917 John W. King, a naturalist and woodsman and civil engineer by trade, left Miami with his 15-year-old son, John Jr. and William Catlow Jr., also 15, to survey a parcel of land on the West Coast of Florida. He had been hired by Capt. J.F. Jaudon, contractor for the Dade County portion of the Tamiami Trail, who needed more information on the Lee County area.

King's plan was to turn south from a Lee County survey site toward the Monroe County line, then easterly along the Shark River trail to the Tamiami dredging camp, some 30 miles from Miami. The trio carried provisions for a two-week trip, a flat-bottom glade boat, guns and plenty of ammunition.

They expected to return to Miami by Feb. 24. It was March 16 before they made it back.

Miami was suffering its worst drought in 18 years. Low water, caused partly by the drought and partly by the dredging of the Tamiami Trail canal, became the explorers' largest problem.

Instead of floating in the boat through the glades, King and the two boys dragged the skiff almost 200 miles over jagged rock and through almost impenetrable jungle.

After running out of food, they subsisted on garfish, cabbage palmetto, curlew eggs and fetid water.

**T**he initial leg of the journey wasn't too difficult. North of the canal there was water enough to paddle their boat. South of the canal, jagged rock protruded skyward and dead fish floated in the sluices created by the drainage scheme devised by Jaudon for the Tamiami Trail.

It was after the threesome decided to seek an easier route home that their problems began. King was to say later:

"The further we went, the worse it got."

On Feb. 27, four days after King and the two boys were expected to report back to Jaudon, the news that they were missing appeared on page 6 of *The Miami Herald*. Relatives and friends expressed concern and "grave alarm," the newspaper reported.

Two days earlier, Jaudon had dispatched J.T. Albritton, a trapper and hunter, into the glades to find the party. A day later, he had sent Seminole Indian Chief Jack Tigertail.



1920 map above shows Manatee, DeSoto, Lee and Monroe counties making up southwest quadrant of the state. Okeechobee and Broward were two of seven counties added since 1910, bringing total to 54.

The King expedition into Lee County took place in what is now Collier County.

**S**ubsequent search parties from Fort Lauderdale to Key Largo entered the Everglades without luck. Some of the participants were V.C. Hallows, assistant engineer of the Tamiami Construction Camp; Theodore Junkin, half-brother of Catlow; S.E. Livingston of Homestead; one of the Dorn brothers from Larkin (South Miami); L.D. Franklin of Fort Lauderdale.

Glenn Curtiss, who headed a military airplane training school in Dade County, sent Phil Rader and Bert Tubbs, a surveyor, over the glades in a military-type plane.

*The Herald* said, "Mr. Rader, known as one of the most daring and at the same time able aviators, arose to the remarkable height of 14,000 feet, shattering previous rec-

Reprinted from *Update*, magazine of the Historical Association of Southern Florida, ©1982. All rights reserved.

ords for altitude for a passenger and pilot. The former record was somewhat in excess of 12,000 feet."

Rader said it was necessary to fly at such heights because of treacherous air currents. Also, in case of engine failure, they could glide back to Miami safely.

*The Herald* carried the search story on page 1 for the first time on March 12. The headline read:

"One More Day of Suspense and King's Party Not Found."

The party was by then 16 days overdue.

**A**uthor W. Livingston Larned, writing for the magazine *Forest and Stream*, described their ordeal:

"That impenetrable barrier of swamp thicket was as invincible as though made of stone. They could only retrace steps—back, back, to the chain of miserable coastal hummocks and muddy streams and barren, angular island, and the nauseous sluices filled with putrid fish.

"While the entire South hung feverishly in the balance, and searching parties were scouring the swamps, and aeroplanes from the Aviation Camp at Miami scouted, Mr. King and his little party were as completely shut off from the world as though lodged on Mars."

Their water gave out. They drank "dogwood poison" which made them sick. Dogwood poison was stale, putrid water found in sink holes and sluices where water movement was impossible.

Their ammunition became wet and the pellets from their shotguns bounced off birds without harming them.

It was at this time that King contemplated suicide, the magazine reported.

"King drew apart from the boys and prayed. Death seemed nearer at hand than ever before.

"Would it be best to form a circle in the dim swamp and, with linked hands take from Mr. King's Medicine Kit that which would bring an unawakening sleep and end the story?"

In the magazine's August 1918 issue of the ordeal, Larned wrote:

"The morning of March 11th: Awakening now, with each successive dawn, brought none of the old-time joy. Once they had eagerly awaited these ghostly, pink day-breaks, with their panoramic beauty and their incessant hum of insect or call of bird.

**"M**r. King and the boys were now in no mood to look for Nature's artistic whims. The expedition had narrowed down to a desperate attempt to keep body and soul together, until the exigencies of the situation should make it unnecessary to struggle on.

"And to Mr. King, at least, that hour had arrived. He saw the dial of his watch through a haze, for his eyes were blurred and his head buzzing. He remembered struggling, as he attempted to get upon his feet. It was weakness—physical weakness! Six o'clock, with all the vast expanse of muck and saw grass and stunted myrtles, bathed in strange light.

"It was eleven before they could proceed. Twice Mr. King fainted and the boys dashed wet leaves into his face and forced hot cabbage palm broth between his dry lips.

"There were any number of shallow waterways leading

to the southward and they selected one at random; the widest and deepest. There was a current. This Mr. King could easily ascertain. It was inspiring to watch the bending grass and the purl of the first real 'water' they had observed in so long a while. It seemed illogical to suppose that this current could die out. It might split, thinning out into many channels through the grass, but it would come together again. Moreover, there was a gratifying absence of marl.

**"T**hey came upon a course so shallow that it was necessary to drag the boat over the muck. All three bent to this task, although the stops were frequent and the pain of the added exertion almost intolerable. They had fallen into a habit of silence . . . There was an hour of this, when to coax the skiff along was a giant task, and then . . .

" 'The waterways are converging,' said Catlow, in a hoarse, unnatural voice.

" 'Looks that way to me, too,' added John Jr.

"Mr. King could only nod and smile—a tired, grim smile.

"There was enough water to float the skiff. They dragged it through a hedge of tall grass and had the satisfaction of seeing it ride triumphantly upon the surface of a well-filled slough. There were Indian markers, too, swaying and bending their white faces, a sure sign of deep water. These pigweed 'stakes' are the Seminole's route sheet through the 'Glades. As his canoe passes, it bends them, disturbs their roots, and the sun bleaches them a distinctive shade."

By 2:30 there was a marked flow of water. They were at the mouth of the Shark River but didn't know it.

**A**fter floating downstream for what seemed an eternity they heard voices ahead. They had stumbled upon workmen of the Manetto Company which manufactured tannic acid from palmettos and other products. After introductions and a rest, King persuaded J.G. Piodela, superintendent of the company, to provide transportation back to Key West.

In Miami, *The Herald* had started a collection of money to continue the search but a day later it was cancelled when Jaudon received a telegram from Key West.

"We arrived here today (March 15), all safe and sound, after a hard trip and will return to Miami on tonight's train. Call off the dogs of war as we are now with Piodela."

Several search parties were still in the Everglades and runners were dispatched to bring them home.

After Mr. King's arrival in Miami on the train, he told friends that in the future it would not be necessary to send so many search parties out into the Everglades.

"Two men would be enough," he declared.

"An expert trailer and an undertaker's assistant."

---

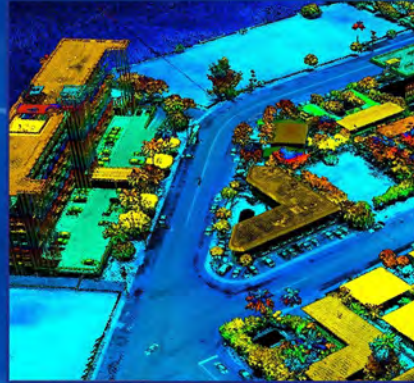
**Mr. King's son, John W. III, (John Jr. above), died June 12, 1980, at his home in Port St. Lucie at the age of 79. He had retired from the Navy after a long and distinguished career as a captain.**

**His boyhood friend, Catlow, is a retired chemical engineer living in Coconut Grove. His wife Patty is Commodore Ralph Munroe's daughter who grew up in The Barnacle, the Munroe home that is now a state park.**



# SUCCESS CAN BE MEASURED

Land & Hydrographic Surveys  
Aerial LiDAR Mapping & Imagery  
UAS & USV Mapping  
Transmission Engineering



**PICKETT**  
SURVEYING • ENGINEERING

Bartow • Dallas • Gainesville • Raleigh • Tampa  
PickettUSA.com 863.533.9095



p: 770.695.3361 | c: 813.955.0212 | www.egps.net

**YOUR ONE-STOP SHOP FOR ALL SURVEYING NEEDS!**

RTK Network | Equipment, Supplies, Accessories | Tech Support  
Certified Repairs | Rentals | UAV, LiDAR Sales & Training

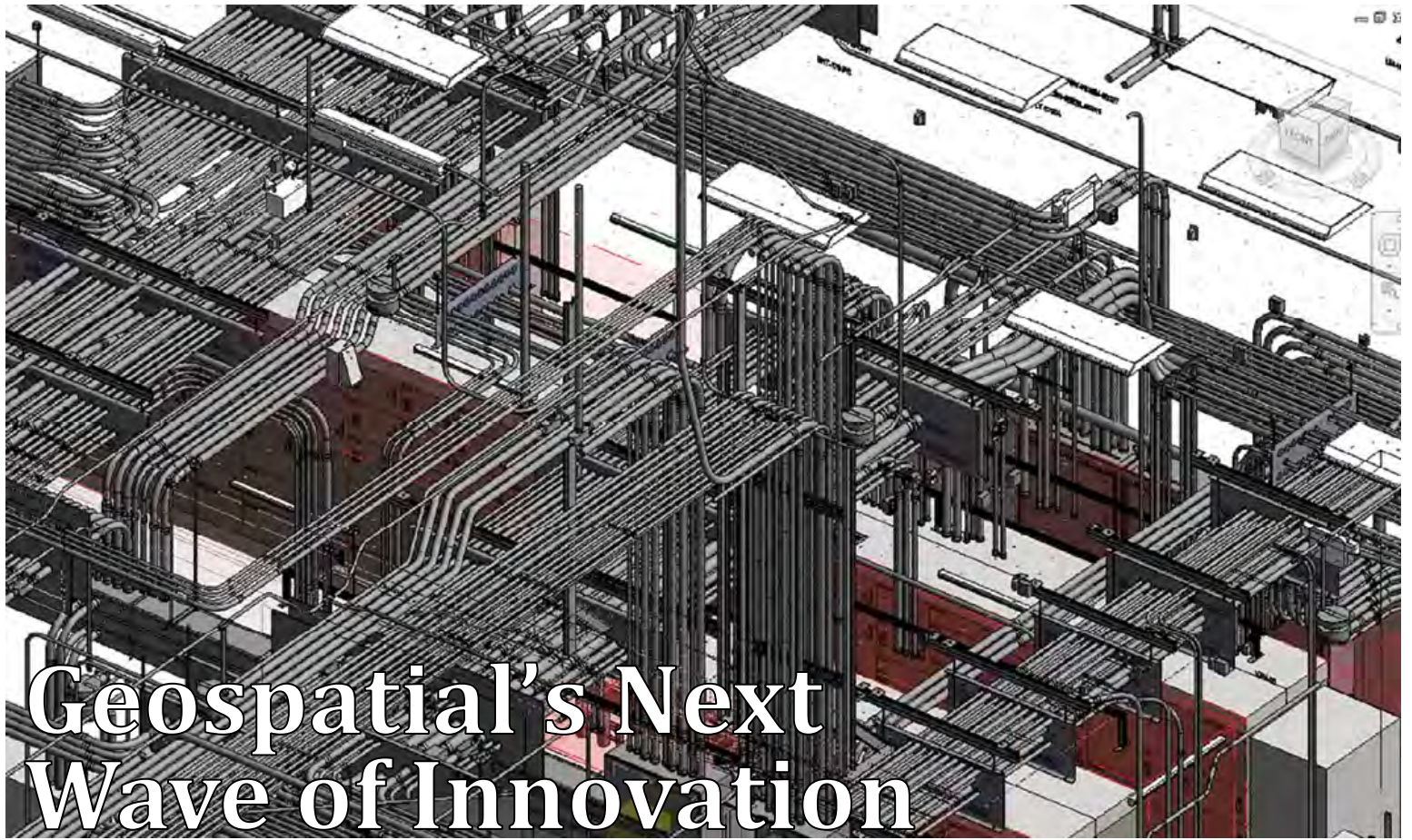


Authorized Reseller of  
**LiDAR USA**  
Fagerman Technologies Inc.



Authorized Reseller of  
**GEOMAX**

Gold Status GeoMax-Authorized  
Total Station, Robotics and GPS Service Center.



# Geospatial's Next Wave of Innovation

By Boris Skopljak & Chris Trevilian  
February 10, 2019

*This article originally appeared in the February 2019 issue of The American Surveyor.*

There's no question digital transformation is making geospatial technology increasingly relevant in industries globally, whether adding precision to a position, context to mass data collection, or content and attributes to a project model.

Spurred by an evolution in computing power and connectivity that soon will improve exponentially with 5G connection speeds, the rise in global demand for geospatial data and geo-enabled devices is propelling technologies to evolve. In fact, according to a recent GeoBuiz report, the global geospatial market is expected to grow an estimated 13.6 percent through 2020, significantly faster than the growth rate of 11.5 percent from 2013-2017. It also

shows the GNSS and positioning industry—the largest of the geospatial universe—is estimated to grow at a CAGR of 13.5 percent to reach \$260.8 billion in 2018-2020. The GIS and spatial analytics market is the second largest, the report states, with rapid growth expected to continue from \$66.2 billion (a 2017 estimate) to \$88.3 billion in 2020.

Scanning the horizon, these questions emerge: What technologies will transform the geospatial industry in the next few years? What are the next big steps required to make spatial content more relevant?

Geospatial professionals are hungry for advances in technology that can help them do more, including providing richer, more insightful deliverables to general contractors, civil engineering and construction teams, designers, business owners and key project stakeholders.

When considering the next wave of geospatial technology, the most dis-

ruptive themes include sensor fusion, autonomous vehicles, mixed reality, big data analytics, the as-a-service business model and 3D modeling/BIM. Many of these innovations will be available not merely through a single tool, but through the integration of multiple technologies.

Here are the key technology trends we believe will drive the geospatial industry forward over the next 18-24 months:

## Sensor Fusion

Sensor fusion is one of the leading edges of product development because of the power that comes from combining multiple different sensor types or technologies in ways that maximize their combined strengths while minimizing their combined weaknesses. The fusion of sensor technologies to include more IMUs, GNSS and emerging technologies like Solid State LiDAR and SLAM processing is making it possible to merge multiple disci-

plines of mass geospatial data capture into one seamless routine.

Mobile mapping systems are one example. They combine the various strengths and weaknesses of different types of sensors—inertial (IMU), wheel speed, GNSS, cameras and LiDAR—and fuse these sensor outputs, achieving greater levels of accuracy and detail for engineering operations and design.

Having different types of sensor data can be extremely powerful, but even more beneficial is fusing that data for analysis and decision making. Supported by the right software, sensor fusion is about getting the most out of various sensors and sensor combinations to solve business problems.

This technology integration will remain a growing trend in the surveyor community as more geospatial professionals take advantage of unique sensor combinations purpose-built to help provide better geospatial context.

## Data-Driven Decisions

There's been significant effort and accomplishment in making mass data collection easier over the last decade. Looking ahead, geospatial professionals will need to spend an equal amount of effort to make that data useful in meaningful ways. In other words, technology innovators need to provide geospatial professionals with the processing tools and software applications necessary to effectively process the data into deliverables that matter.

Also, because the future geospatial industry has limited tolerance for restraints such as the use of multiple software packages to store and analyze data, we will start to see further adoption of a single geospatial data hub that enables users to bring all disparate data to a single department, enabling field-to-finish with confidence. This central hub will also allow geospatial professionals to choose the best hardware tool for the job, whether they walk it, fly it or drive it to gather data.

The ultimate goal will be to move

away from heterogeneous files—and those collections of data—into reusable, more reliable systems of record that can be used across multiple disciplines and multiple user personas. The cloud-based platforms and feature services will play a major role in eliminating unnecessary physical data transfer and connect and enable easier project collaboration and information exchange.

## As a Service Business Model

Geospatial customers increasingly see solutions offered as a subscription or pay-as-you go service, rather than a one time purchase. This model is providing benefits to enterprise and large organizations enabling them with a more predictive cash flow. The as-a-service model provides easier access to professional grade measurement technologies, enabling more people to enhance and streamline workflows and project deliverable creation. The as-a-service approach results in more people using their smartphones and mobile devices to receive satellite data for



*Mixed reality is a form of augmented reality (AR) that merges real and virtual worlds to create brand new environments where physical and digital components interact in real time. With Trimble Connect for HoloLens, users can interact with what they see on a 1:1 scale and compare components against design and installation guidance.*



*With the Trimble MX9 Mobile Mapping System, all sensors are time synchronized with precise GPS time tags and are linked to the trajectory that is recorded with the GNSS/IMU subsystem. That way, all recorded points and images can be properly aligned in a post-processing step.*

a precise position. This technology advancement will multiply the capability of field organizations to increase the reach and rapidness of data collection in the coming years.

### Modeling and Visualization

Geospatial data—such as point clouds, complex meshes and terrain models—are often difficult to explain and deliver to clients. The use of augmented reality (AR) and mixed reality (MR) tools will increase in the next several years to improve understanding of existing site conditions by overlaying models over the existing environment. For example, a user of augmented reality technology could view existing underground services and future landscapes overlaid on a worksite to avoid hitting a utility line during excavation work. Other benefits include collaboration, planning and asset management. Organizations that can offer this functionality to their customers will have an edge on the competition.

### 3D Modeling, BIM

The design and construction industry is at a tipping point in which BIM (Building Information Modeling) can positively impact geospatial professionals' work the more they embrace it. However, prospective BIM adopters need to realize the technology not only provides intelligent 3D modeling, but it also offers a centralized platform for sharing data to help partners communicate effectively – in real-time. When surveyors take advantage of BIM holistically, they are not only factoring in the traditional aspects of a building's design but also generating rich data spanning the range of properties of a structure's components, construction and maintenance.

The challenge with BIM adoption is not just to encourage surveyors to use newer technologies, but rather to convince them to start seeing it as a paradigm shift in the design and build process altogether. At its core, BIM is meant to transform how project teams

work together on a job, from start to finish.

### Future Technology Innovation: Closing the Gap on Segmented Functionalities

As the digital world continues to evolve, the relevance of geospatial information and technology will continue to build on its current momentum, adding spatial dimensions to many business processes.

Traditional silos that previously segmented functionalities will increasingly dissolve, with further integration driven by cutting-edge technologies. This integration will help reduce the gap between data capture, processing, analysis and delivery of an easy-to-understand, cohesive image of the real world, from surveyor to customer.

Looking ahead, as more geospatial professionals embrace the power of these digital advances, there will be productivity improvements, cost savings and new business opportunities to realize for years to come.

**SURV-KAP®** THE LANDMARK NAME IN SURVEY PRODUCTS  
Exceptional Customer Service

- REBAR & PIPE CAPS
- CONCRETE MARKERS
- SURVEY MONUMENTS
- SECTIONAL ROD MONUMENTS
- ACCESS COVERS
- WASHERS & NAILS
- SUBSURFACE MAGNETICS
- STAMPING TOOLS
- SURVEY TOOLS & ACCESSORIES

CALL OR ORDER ONLINE!

520-622-6011 • 800-445-5320 • FAX 520-792-2030 • SURV-KAP.COM

# GPI



GPI Geospatial, Inc. | LIDAR | Photogrammetry | Asset Management

# JOIN OUR TEAM!

We are looking for professional individuals to join our team.

## OPEN POSITIONS:

- Professional Surveyor & Mapper
- Aerial, Mobile, and Static LiDAR Technicians
- Photogrammetry Mappers & Scientist
- Geospatial Project Managers

Visit our website: [www.gpinet.com/geospatial](http://www.gpinet.com/geospatial)

# Did YOU Ever WONDER Why?

Michael Whitling, PSM

## Why do they put pine trees on top of buildings under construction?

The trees are known as topping trees and are used as part of a “topping out” ceremony to signify the completion of the skeleton of a building structure. If the building is a skyscraper, the evergreen is attached to the top beam as it is hoisted, a signal that the building has reached its final height. For some builders, the evergreen symbolizes that no one in the construction crew died, for others the tree stands as a talisman for good luck and prosperity for the future occupants of the building. Like many rituals, topping out celebrations stem from ancient superstitions. The first evidence of trees being hoisted atop buildings was in 700 A.D. in Scandinavia. Scandinavian cultures would place a tree on top of a new building to appease the tree-dwelling spirits displaced in its construction, a practice that eventually migrated, albeit with different symbolism, to America.



## Why is discussing something frankly and practically called “talking turkey?”

The word turkey surprisingly has a lot of dual meanings. Besides being a big-feathered bird everyone enjoys during their Thanksgiving feast, taking home a turkey is considered a brag-worthy feat, but being called one is, in contrast, considered an insult. Historically the meaning of “talking turkey” has varied as well. Dictionary entries from the 1800s note that “talking turkey” has meant both talking about something pleasant and also talking in a silly manner, like the weird way turkey’s walk and act. The origin of “talking turkey” comes from colonial times. Historical accounts suggest the phrase came about from the day-to-day bartering between colonists and Indians over wild turkeys. One piece of folklore in particular from the 1800’s has stood the test of time as the origin of the phrase, although it’s hard to determine whether the story actually happened:

*An Indian and a white man went hunting in partnership and a wild turkey and a crow were all the results of the day's toil. The white man, in the usual style of making a bargain with the Indian proposed a division of the spoils in this way: "You may have your choice: you take the crow, and I'll take the turkey; or, if you'd rather, I'll take the turkey and you take the crow." The Indian reflected a moment on this alternative offered, and replied – "You no talk turkey to me."*

Today there's a lot of “talking turkey”, especially in boardrooms, congressional hearings and at political debates. For some pleasant, for others rather silly.



## Why are notes taken at a meeting called the “minutes?”

The “minutes” here have nothing to do with time, but rather “small”, as in “minute” (my-newt). “Minutes” in this sense first popped up in the early 18th century, from the Latin “minuta scriptura”, meaning “small notes” (“minuta”, meaning “small”). So at your next meeting ask for someone to read the “minutes” (my-newts) from the last meeting. Then stare back at them.

### Quick Facts:

⇒ For all you bracketologists, No. 1 seeds are a good bet to make the Final Four in college basketball. Since the NCAA began seeding teams in 1979, at least one No. 1 seed has made the Final Four every year except for 1980, 2006 and 2011. But all four No. 1 seeds have only advanced once, when Kansas, Memphis, North Carolina and UCLA pulled off the feat in 2008.

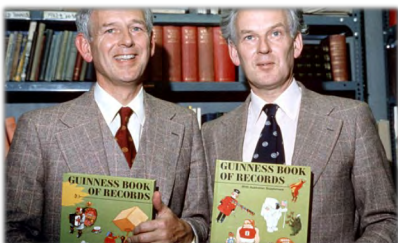
⇒ President Grover Cleveland (1837-1908) is the only president to be elected to two nonconsecutive terms. He was the 22nd and 24th president.



⇒ In July 1934, Babe Ruth paid a fan \$20 dollars for the return of the baseball he hit for his 700th career home run. Bielski, a Detroit youngster, was on the sidewalk outside Navin Field's right-field fence and emerged with the ball after a wild scramble. Babe Ruth wanted the ball so ushers were dispatched to find it. Bielski was brought into the park, given a twenty-dollar bill for the ball, and was permitted to watch the rest of the game from a box seat. The family still has the twenty dollar bill (autographed by Ruth) which Ruth gave in exchange for the baseball. That ball is probably worth over \$750,000 today.

⇒ Used for water distribution, the Delaware Aqueduct in New York is the longest tunnel in the world.

⇒ The Guinness Book of World Records was created to settle bar arguments. The official origin story for the Guinness Book of World Records, the annual book that catalogs all of human achievement, is that it was used to settle an argument over whether the golden plover or the red grouse is the fastest game bird in Europe. (It's the plover). One of the people arguing, Sir Hugh Beaver, the Managing Director of the Guinness Brewery, noted that the answer was hard to find in reference books. So he started one to settle these kinds of trivial arguments and the Guinness Book of World Records was born in 1955.



⇒ Some turkeys can spontaneously impregnate themselves through a process called Parthenogenesis.

⇒ Human children don't get kneecap bones until they're around three years old. That part of the skeleton is called the patella. It starts out as cartilage and then ossifies into bone at around toddler age.

⇒ If your dog's feet smell like corn chips, you're not alone. The term 'Frito Feet' was coined to describe the scent.

⇒ New York is the third most populous state in the United States after California and Texas. Of its population of 19 million, a little over 8 million live in New York City alone. In fact, about 1 in every 38 people in the U.S. lives in New York City, and more people live in New York City than in Australia and Switzerland combined.

⇒ The most shoplifted food item in the U.S. is candy. In Europe, it's cheese.

⇒ The smallest dog on record was a matchbox-size Yorkshire terrier. It was 2.5" tall at the shoulder, 3.5" from nose tip to tail, and weighed only 4 ounces. Zorba, an English mastiff, is the biggest dog ever recorded. He weighed 343 pounds and measured 8' 3" from his nose to his tail.

⇒ In a study by the Smell & Taste Research Foundation, the scent women found most arousing was Good & Plenty candy mixed with cucumber.

⇒ About 108.2 billion people have ever been born in the history of the world. And about 7.442 billion are alive today. If you do the math, you'll see just how crazy population growth can be. About 7% of all humans who have ever lived are alive today.

⇒ In April 1998, an aggressive creature named Tyson smashed through the quarter-inch-thick glass wall of his cell. He was soon subdued by nervous attendants and moved to a more secure facility. Unlike his heavy-weight namesake, Tyson was only four inches long. But scientists have recently found that Tyson, like all his kin, can throw one of the fastest and most powerful punches in nature. He was a mantis shrimp. Mantis shrimps are aggressive relatives of crabs and lobsters and prey upon other animals by crippling them with devastating jabs. Their secret weapons are a pair of hinged arms folded away under their head, which they can unfurl at incredible speeds with a force of a 22-caliber bullet.



Send your thoughts to [drmjw@aol.com](mailto:drmjw@aol.com)



# From the Archives

**From 1978:** An excerpt from an unidentified March 1978 publication featuring Dann McKee, the first student to receive a Bachelor of Land Surveying degree from the University of Florida.

*P.S. - If you know Dann, show him this page!*



**Dann McKee, University of Florida's first Bachelor of Land Surveying Graduate.**

## **U.F.'s FIRST BACHELOR OF LAND SURVEYING**

**DATELINE GAINESVILLE ...  
March, 1978.**

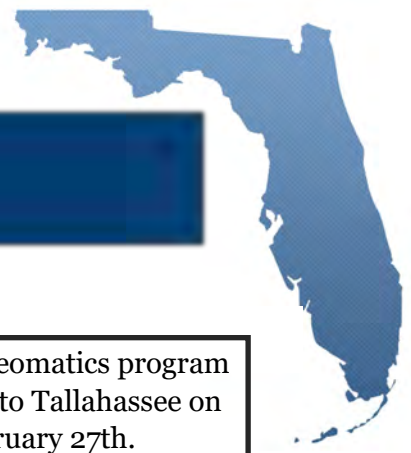
Dann Lindsay McKee steps up to the podium with proud relatives and friends looking on and accepts the first diploma from the University of Florida imprinted with the words BACHELOR OF LAND SURVEYING. So begins a new era in the education of surveyors in the state of Florida.

Dann's degree is the first awarded with the title approved by the Board of Regents this past January. Nearly 20

*(Continued on page 2)*



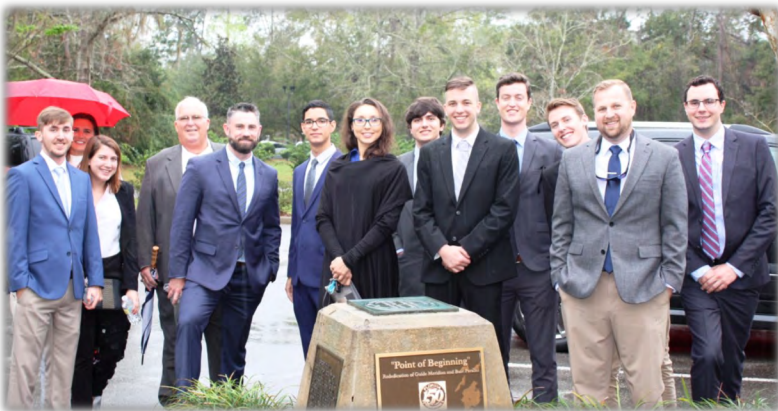
# Around the State



*The group at the FDEP Records Vault.*

The Seniors in the UF Geomatics program made their annual visit to Tallahassee on Wednesday, February 27th.

They visited several locations across Tallahassee, including the Capitol, FDEP, and the FSMS Administrative Office. Jack Breed chaperoned the group throughout the day.



*At the Florida Initial Point Monument, just outside the FSMS office.*



*With FSMS lobbyist David Daniel at the Florida Capitol.*



*At the FSMS Administrative Office. The FSMS Staff was less than enthused about the pose the students were making.*



# 2019 eLearning Courses



Basics of Real Property Course #8380 (3 General CEC)

**\$ 70<sup>00</sup>**



Boundaries in Florida Course #8255 (6 SOP/L&R CEC)

**\$ 120<sup>00</sup>**



Contracts for the Professional Course #8412 (3 General CEC)

**\$ 70<sup>00</sup>**



Elevation Certificates and the Community Rating System Course #8256 (3 General CEC)

**\$ 70<sup>00</sup>**



Ethics for the Design Professional Course #8621 (6 General CEC)

**\$ 120<sup>00</sup>**



Florida Laws Course #7149 (6 SOP/L&R CEC)

**\$ 120<sup>00</sup>**



Professional Ethics and Professional Courtesies FULL Video Course #8363 (6 General CEC)

**\$ 120<sup>00</sup>**



Georgia Technical Standards for Property Surveys Course #8554 (6 General CEC)

**\$ 120<sup>00</sup>**



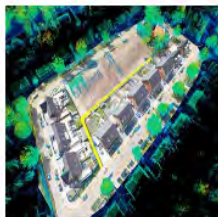
History of Surveying Course #7140 (6 General CEC)

**\$ 120<sup>00</sup>**



Identification of Native and Non-Native Trees in Florida Course #8132 (6 General CEC)

**\$ 120<sup>00</sup>**



Introduction to Photogrammetry Course #7968 (3 General CEC)

**\$ 70<sup>00</sup>**



Land Tenure and Cadastral Systems Course #8260 (6 General CEC)

**\$ 120<sup>00</sup>**



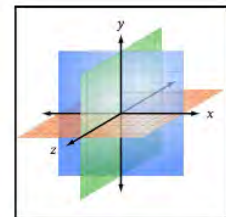
Map Projections and Plane Coordinate Systems Course #8261 (6 General CEC)

**\$ 120<sup>00</sup>**



Mean High Water Observations & Computations Course #8262 (6 General CEC)

**\$ 120<sup>00</sup>**



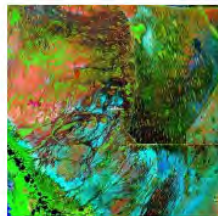
Practical Geometry for Surveyors Course #7141 (6 General CEC)

**\$ 120<sup>00</sup>**



Public Land Survey System Course #7147 (6 General CEC)

**\$ 120<sup>00</sup>**



Remote Sensing Applications to Surveying & Mapping Course #7148 (6 General CEC)

**\$ 120<sup>00</sup>**



Writing Boundary Descriptions Course #8362 (3 General CEC)

**\$ 70<sup>00</sup>**



# FSMS Correspondence Courses

Lowest Rates of Any Florida Surveying and Mapping Continuing Education Provider

## Step 1: Choose Course(s)

### 3 Hour Courses Available

- A History of the Prime Meridian Marker, #8403, 3 CEC**
- Basics of Real Property, #8359, 3 CEC**
- Contracts for the Professional, #8411, 3 CEC**
- Digital Signatures for Surveyors, #8491, 3 CEC**
- Elevation Certificates and the Community Rating System, #8257, 3 CEC**
- Introduction to Photogrammetry, #7887, 3 CEC**
- Quality Assurance/Quality Control for the Design Professional and Technical Staff, #9293, 3 CEC**
- Writing Boundary Descriptions, #8361, 3 CEC**

### 6 Hour Courses Available

- Boundaries in Florida, #7667, 6 CEC**
- Chapter 177, Platting (Plat Law), #6970, 6 CEC**
- Client Satisfaction Excellence for Surveying and Mapping Professionals, #7229, 6 CEC**
- Critical Communication for Surveying & Mapping Professionals, #7228, 6 CEC**
- Ethics for the Design Professional, #8620, 6 CEC**
- Florida Laws, #6966, 6 CEC**
- Florida Surveying Law and Rule Changes, #9573, 6 CEC**
- Georgia Technical Standards for Property Surveys, #8553, 6 CEC**
- Geographic Information Systems (GIS), #7107, 6 CEC**
- History of Surveying, #7108, 6 CEC**
- Identification of Native and Non-Native Trees in Florida, #7874, 6 CEC**
- Land Tenure and Cadastral Systems, #7829, 6 CEC**
- Map Projections and Plane Coordinate Systems, #7669, 6 CEC**
- Mean High Water Observations and Computations, #8220, 6 CEC**
- Practical Geometry for Surveyors, #7109, 6 CEC**
- Public Land Survey System, #6979, 6 CEC**
- Remote Sensing Applications to Surveying & Mapping, #6972, 6 CEC**
- Stress Management for Surveyors & Mappers: How to be Productive Under Pressure, #6902, 6 CEC, ONLY AVAILABLE BY MAIL**
- Time Management for Surveyors & Mappers: How to be Productive & Exercise Time Mastery in a Hectic World, #6901, 6 CEC, ONLY AVAILABLE BY MAIL**

## Step 2: Choose Member Type

**FSMS Member**

<i>EMAILED</i>	Fee	Quantity	Amount
6 CEC	\$115 Per Course	x _____ =	\$ _____
3 CEC	\$58 Per Course	x _____ =	\$ _____
<i>MAILED</i>			
6 CEC	\$125 Per Course	x _____ =	\$ _____
3 CEC	\$68 Per Course	x _____ =	\$ _____
<b>TOTAL</b>			\$ _____

**Non-Member**

<i>EMAILED</i>	Fee	Quantity	Amount
6 CEC	\$135 Per Course	x _____ =	\$ _____
3 CEC	\$78 Per Course	x _____ =	\$ _____
<i>MAILED</i>			
6 CEC	\$145 Per Course	x _____ =	\$ _____
3 CEC	\$88 Per Course	x _____ =	\$ _____
<b>TOTAL</b>			\$ _____

**Non-Licensed in ANY State**

<i>EMAILED</i>	Fee	Quantity	Amount
6 CEC	\$100 Per Course	x _____ =	\$ _____
3 CEC	\$60 Per Course	x _____ =	\$ _____
<i>MAILED</i>			
6 CEC	\$110 Per Course	x _____ =	\$ _____
3 CEC	\$70 Per Course	x _____ =	\$ _____
<b>TOTAL</b>			\$ _____

## Step 3: Payment Information

Name: \_\_\_\_\_ PSM#: \_\_\_\_\_ State: \_\_\_\_\_ FSMS Member: \_\_\_ YES \_\_\_ NO

Firm: \_\_\_\_\_ Sustaining Firm: \_\_\_ YES \_\_\_ NO

Address: \_\_\_\_\_

City/State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Email Address: \_\_\_\_\_ Work Phone: \_\_\_\_\_

Payment Information: \_\_\_\_\_ Check Enclosed (Payable to FSMS) \_\_\_\_\_ VISA/MasterCard/American Express

Card #: \_\_\_\_\_ Exp. Date: \_\_\_\_\_ CVV Code: \_\_\_\_\_

Billing Address of Credit Card: \_\_\_\_\_

Signature: \_\_\_\_\_

**IF PAYING BY CHECK, MAIL FORM TO: FSMS, P.O. Box 850001-243, Orlando, Florida 32885-0243**

**IF PAYING BY CREDIT CARD, FAX OR EMAIL FORM TO: 850.877.4852 [education@fsms.org](mailto:education@fsms.org)**

**QUESTIONS? CALL 800.237.4384**

## District 1

### Panhandle

William T. Butler  
(850) 476-4768  
wtb@butlersurveying.com

### Emerald Coast

Robert Johnson  
(850) 682-5306  
bobndee1@cox.net

### Gulf Coast

Frederic Rankin  
(850) 571-1194  
erankin@dewberry.com

### Chipola Area

Lee Anderson  
(850) 638-0790  
landerson@southeasternsurveying.com

### Northwest Florida

Chad Thurner  
(850) 200-2441  
chad@ncginc.com

## District 2

### Florida Crown

Bill Faust  
(904) 641-0123  
cfaust@drmp.com

### North Central Florida

Hal Peters  
(352) 304-9534  
hpeters@gpinet.com

### UF Geomatics

Anissa Williston  
(239) 601-2981  
anissamar12@ufl.edu

## District 3

### Central Florida

Leon Hampton  
(321) 231-4874  
leon@lhpsm.com

### Indian River

Brion Yancy  
(772) 475-7475  
byancy@martin.fl.us

### Space Coast

Joe Williamson  
(407) 873-3837  
Joew.fsms@gmail.com

### Volusia

Anthony Sanzone  
(386) 672-3633  
eastcoastland@bellsouth.net

## District 4

### Ridge

Larry Sharp  
(863) 640-9017  
lrsharp@collinssurvey.com

### Tampa Bay

Robert Breedlove  
(813) 234-0103  
robert@rjbsurveyor.com

## District 5

### Charlotte Harbor

Greg Rieth  
(941) 481-1290  
greg@strayersurveying.com

### Collier-Lee

Steve Shawles II  
(239) 481-1331  
sshawles@bwlk.net

### Manasota

Joseph Kelly  
(941) 907-6900 ext. 277  
joe.kelly@stantec.com

## District 6

### Broward

Earl Soeder  
(954) 818-2610  
earl@gpserv.com

### Palm Beach

Derek Zeman  
(561) 757-2303  
dzeman@drmp.com

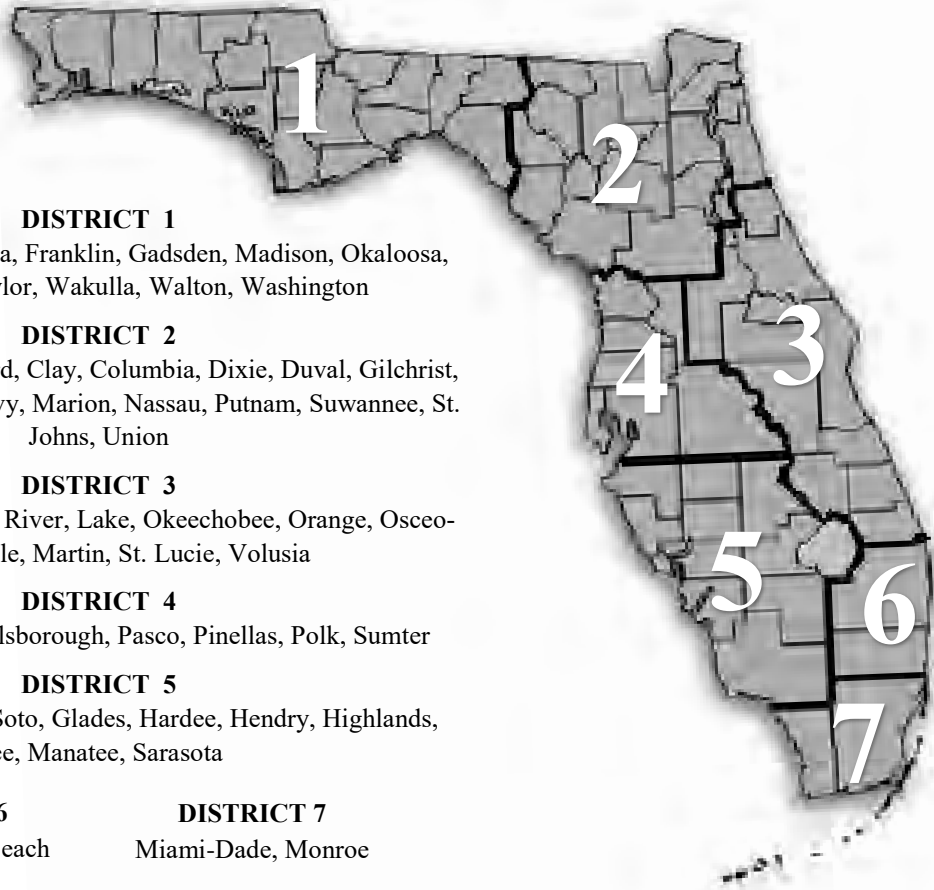
### FAU Geomatics

Gerardo Rojas  
(561) 297-2658  
grojas2017@fau.edu

## District 7

### Miami-Dade

Frank Paruas-Suiero  
(786) 831-2251  
fparuas@gpinet.com



**DISTRICT 1**

Bay, Calhoun, Escambia, Franklin, Gadsden, Madison, Okaloosa, Santa Rosa, Taylor, Wakulla, Walton, Washington

**DISTRICT 2**

Alachua, Baker, Bradford, Clay, Columbia, Dixie, Duval, Gilchrist, Hamilton, Lafayette, Levy, Marion, Nassau, Putnam, Suwannee, St. Johns, Union

**DISTRICT 3**

Brevard, Flagler, Indian River, Lake, Okeechobee, Orange, Osceola, Seminole, Martin, St. Lucie, Volusia

**DISTRICT 4**

Citrus, Hernando, Hillsborough, Pasco, Pinellas, Polk, Sumter

**DISTRICT 5**

Collier, Charlotte, DeSoto, Glades, Hardee, Hendry, Highlands, Lee, Manatee, Sarasota

**DISTRICT 6**

Broward, Palm Beach

**DISTRICT 7**

Miami-Dade, Monroe

**District 1 - Northwest**

Eric Stuart  
(850) 857-7725  
eric.stuart@sam.biz

Chad Thurner  
(850) 200-2441  
chad.thurner@sam.biz

**District 5 - Southwest**

Ralph Rhodes  
(941) 924-1600  
rjr@rjrhodes.com

Jeffrey Cooner  
(239) 829-7016  
jeff.cooner@cardno.com

**District 2 - Northeast**

Nick Digruzzolo  
(863) 344-2330  
ndigruzzolo@pickettusa.com

Randy Tompkins  
(904) 755-4235  
randytompkins1@outlook.com

**District 6 - Southeast**

Jim Sullivan  
(561) 687-2220  
jim.sullivan@wginc.com

Dodie Keith-Lazowick  
(954) 788-3400  
dkeith@keithteam.com

**District 3 - East Central**

Joe Perez  
(407) 395-3518  
jlperez@pesengsurv.com

Howard Ehmke  
(561) 682-2987  
hehmke@sfwmd.gov

**District 7 - South**

Manny Vera, Jr.  
(305) 221-6210  
mverajr@mgvera.com

Lou Campanile, Jr.  
(954) 980-8888  
lou@campanile.net

**District 4 - West Central**

Greg Prather  
(863) 533-9095  
gprather@pickettusa.com

Justin Ferrans  
(727) 461-6113  
Justin@polaris-survey.com

**NSPS Director**

Ronnie Figueroa  
(407) 292-8580  
rfigueroa@southeasternsurveying.com

# Committees

## Standing Committees

Nominating Committee	Don Elder
Membership Committee	Jim Sullivan
Finance Committee	Bon Dewitt
Executive Committee	Dianne Collins
Education Committee	Joe Williamson
Annual Meeting Committee	Matt LaLuzerne
Legal Committee	Jack Breed
Strategic Planning Committee	Don Elder
Ethics and Professional Practice Committee	Joe Perez
Constitution and Resolution Advisory Committee	Eric Stuart

## Special Committees

Legislative Committee	John Clyatt
Awards Committee	Bob Strayer, Jr.
UF Alumni Recruiting Committee	Russell Hyatt

## Liaisons

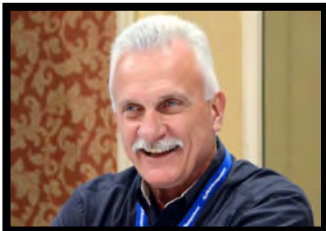
CST Program	Ronnie Figueroa
FDACS BPSM	Lou Campanile, Jr.
Surveyors in Government	Richard Allen
Academic Advisory UF	Bon Dewitt

## Practice Sections

Geospatial Users Group	Richard Allen
Young Surveyor's Network	Britney Powell

## Administrative Staff

**Tom Steckler**



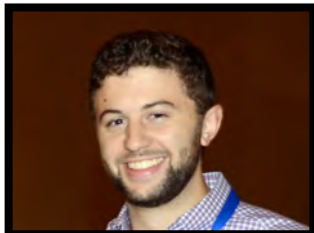
Executive Director  
director@fsms.org

**Rebecca Culverson**



Education Director  
education@fsms.org

**Dominic Levings**



Communications Director  
communications@fsms.org

**Cathy Campanile**



Regional Coordinator  
seminolecc84@gmail.org

## Tom's Tip of the Month

### *The Puzzle of Motivation*

*Click on the picture below to view the video!*



The Florida Surveyor is the official publication of the Florida Surveying and Mapping Society, Inc. (FSMS). It is published monthly for the purpose of communicating with the professional surveying community and related professions who are members of FSMS. Our award winning publication informs members eleven months of the year of national, state, and district events and accomplishments as well as articles relevant to the surveying profession. The latest educational offerings are also included.

## 2019 Sustaining Firms

Accuright Surveys of Orlando, Inc.	407-894-6314	Cross Surveying, LLC	941-748-8340
Agnoli, Barber & Brundage, Inc.	239-597-3111	Culpepper & Terpening Inc.	772-464-3537
AIM Engineering & Surveying, Inc.	239-332-4569	Cumbey & Fair, Inc.	727-324-1070
Allen & Company, Inc.	407-654-5355	Dagostino & Wood, Inc.	239-352-6085
Allen Engineering, Inc.	321-783-7443	Dennis J. Leavy & Associates	561-753-0650
AM Engineering, Inc.	941-377-9178	Donald W. McIntosh Associates, Inc.	407-644-4068
American Consulting Professionals, LLC	813-435-2600	Donoghue Construction Layout, LLC	321-248-7979
American Surveying, Inc.	813-234-0103	Douglass, Leavy & Associates, Inc.	954-344-7994
Amerritt, Inc.	813-221-5200	DRMP, Inc.	407-896-0594
Arc Surveying & Mapping, Inc.	904-384-8377	DSW Surveying & Mapping, PLC	352-735-3796
Associated Land Surveying & Mapping, Inc.	407-869-5002	Durden Surveying and Mapping, Inc.	904-853-6822
Avirom & Associates, Inc.	561-392-2594	E.F. Gaines Surveying Services, Inc.	239-418-0126
Axis Geospatial SE, LLC	386-439-4848	Echezabal & Associates, Inc.	813-933-2505
Banks Engineering	239-939-5490	ECHO UES, Inc.	888-778-3246
Barnes, Ferland and Associates, Inc.	407-896-8608	Eda Engineers-Surveyors-Planners, Inc.	352-373-3541
Barraco & Associates, Inc.	239-461-3170	Eiland & Associates, Inc.	904-272-1000
Bartram Trail Surveying, Inc.	904-284-2224	Element Engineering Group, LLC	813-386-2101
BBLS Surveyors, Inc.	239-597-1315	Engenuity Group, Inc.	561-655-1151
Bello & Bello Land Surveying Corporation	305- 251-9606	Engineering Design & Construction, Inc.	772-462-2455
Benchmark Surveying & Land Planning, Inc.	850-994-4882	England, Thims & Miller, Inc.	904-642-8990
Beta Company Surveying, Inc.	941-751-6016	ER Brownell & Associates, Inc.	305-860-3866
Betsy Lindsay, Inc.	772-286-5753	ESP Associates FL, Inc	813-295-9024
Biscayne Engineering Company, Inc.	305-324-7671	Exacta Land Surveyors, Inc.	305-668-6169
Boatwright and Durden Land Surveyors, Inc.	904-241-8550	F. R. Aleman & Associates, Inc.	305-591-8777
Bock & Clark Corporation	330-665-4821	F.R.S. & Associates, Inc.	561-478-7178
Boundary & Mapping Associates, Inc.	407-696-1155	First Choice Surveying, Inc.	407-951-3425
Bowman Consulting Group, Ltd.	703-464-1000	Florida Design Consultant, Inc.	727-849-7588
Brown & Phillips, Inc.	561-615-3988	Florida Engineering & Surveying, LLC	941-485-3100
BSE Consultants, Inc.	321-725-3674	FLT Geosystems	954-763-5300
Bussen-Mayer Engineering Group, Inc.	321-453-0010	Fortin, Leavy, Skiles, Inc.	305-653-4493
C&M Road Builders, Inc.	941-758-1933	Geo Networking, Inc.	407-549-5075
Calvin, Giordano & Associates, Inc.	954-921-7781	Geodata Consultants, Inc.	407-732-6965
Cardno, Inc.	407-629-7144	Geoline Surveying, Inc.	386-418-0500
Carter Associates, Inc.	772-562-4191	Geomatics Corporation	904-824-3086
Caulfield & Wheeler, Inc.	561-392-1991	Geomni, Inc.	904-758-2601
Causseaux, Hewett & Walpole, Inc.	352-331-1976	GeoPoint Surveying, Inc.	813-248-8888
Chastain-Skillman, Inc.	863-646-1402	George F. Young, Inc.	727-822-4317
CivilSurv Design Group, Inc.	863-646-4771	Geosurv, LLC	877-407-3734
Clary & Associates, Inc.	904-260-2703	Germaine Surveying, Inc.	863-385-6856
Clements Surveying, Inc.	941-729-6690	Global One Survey, LLC	786-486-8088
Coastal Supply, Inc.	321-345-4051	GPI Geospatial, Inc.	407- 851-7880
Collins Survey Consulting, LLC	863-937-9052	GPServ, Inc.	407-601-5816
Compass Engineering & Surveying, Inc.	727-822-4151	Gustin, Cothorn & Tucker, Inc.	850-678-5141
Control Point Associates FL, LLC	908-668-0099	H. L. Bennett & Associates, Inc.	863-675-8882
County Wide Surveying, Inc.	850-769-0345	Hamilton Engineering & Surveying, Inc.	813-250-3535
Cousins Surveyors & Associates, Inc.	954-689-7766	Hanson Professional Services, Inc.	217-788-2450
CPH, Inc.	407-322-6841	Hanson, Walter & Associates, Inc.	407-847-9433
Craven-Thompson & Associates, Inc.	954-739-6400	Hole Montes, Inc.	239-254-2000



## 2019 Sustaining Firms

Honeycutt & Associates, Inc.	321-267-6233	Porter Geographical Positioning & Surveying, Inc.	863-853-1496
Hutchinson, Moore & Rauch, LLC	251-626-2626	Pulice Land Surveyors, Inc.	954-572-1777
Hyatt Survey Services, Inc.	941-748-4693	Q Grady Minor & Associates, PA	239-947-1144
I.F. Rooks & Associates, LLC	813-752-2113	R. M. Barrineau & Associates, Inc.	352-622-3133
Inframap Corporation	804-550-2937	R.J. Rhodes Engineering, Inc.	941-924-1600
John Ibarra & Associates, Inc.	305-262-0400	Reece & White Land Surveying, Inc.	305- 872-1348
John Mella & Associates, Inc.	813-232-9441	Rhoden Land Surveying, Inc.	352-394-6255
Johnston's Surveying, Inc.	407-847-2179	Richard P. Clarson & Associates, Inc.	904-396-2623
Keith and Associates, Inc.	954-788-3400	Robayna and Associates, Inc.	305-823-9316
Kendrick Land Surveying	863-533-4874	Robert M. Angas Associates, Inc.	904-642-8550
King Engineering Associates, Inc.	813-880-8881	Rogers, Gunter, Vaughn Insurance, Inc. (HUB Florida)	850-386-1111
L&S Diversified, LLC	407-681-3836	S&ME, INC.	407-975-1273
Landmark Engineering & Surveying Corporation	813-621-7841	Sergio Redondo & Associates, Inc.	305-378-4443
Leading Edge Land Services, Inc.	407-351-6730	Settimio Consulting Services	850-341-0507
Leiter Perez & Associates, Inc.	305-652-5133	Shah Drotos & Associates, PA	954-943-9433
Leo Mills & Associates, Inc.	941-722-2460	Shannon Surveying, Inc.	407-774-8372
Long Surveying, Inc.	407-330-9717	Sherco, Inc.	863-453-4113
Ludovici & Orange Consulting Engineers, Inc.	305-448-1600	Sliger & Associates, Inc.	386-761-5385
MacSurvey, Inc.	727-725-3269	Southeastern Surveying & Mapping Corporation	407-292-8580
Manuel G. Vera & Associates, Inc.	305-221-6210	Stephen H. Gibbs Land Surveyors, Inc.	954-923-7666
Marco Surveying & Mapping, LLC	239-389-0026	Stoner & Associates, Inc.	954-585-0997
Maser Consulting, P.A.	813-207-1061	Strayer Surveying & Mapping, Inc.	941-497-1290
Massey-Richards Surveying & Mapping, LLC	305-853-0066	Suarez Surveying & Mapping, Inc.	305-596-1799
Masteller, Moler & Taylor, Inc.	772-564-8050	SurvTech Solutions, Inc.	813-621-4929
McKim & Creed, Inc.	919-233-8091	Thurman Roddenberry & Associates, Inc.	850-962-2538
McLaughlin Engineering, Co.	954-763-7611	Tradewinds Surveying Services, LLC	863-763-2887
Metron Surveying and Mapping, LLC	239-275-8575	Tuck Mapping Solutions, Inc.	276-523-4669
Metzger + Willard, Inc.	813-977-6005	Upham, Inc.	386-672-9515
Mock Roos & Associates, Inc.	561-683-3113	Wade Surveying, Inc.	352-753-6511
Moore Bass Consulting, Inc.	850-222-5678	Wallace Surveying Corporation	561-640-4551
Morris-Depew Associates, Inc.	239-337-3993	Wantman Group, Inc.	561-687-2220
Murphy's Land Surveying, Inc.	727-347-8740	WBQ Design & Engineering, Inc.	407-839-4300
Navigation Electronics, Inc.	337-237-1413	Winningham & Fradley, Inc.	954-771-7440
Northstar Geomatics, Inc.	772-485-1415	Woolpert, Inc.	937-461-5660
Northwest Surveying, Inc.	813-889-9236	ZNS Engineering, LC	941-748-8080
NV5, Inc.	407-896-3317		
Omni Communications, LLC	813-852-1888		
On The Mark Surveying, LLC	321-626-6376		
PEC - Surveying & Mapping, LLC	407-542-4967		
Pennoni Associates, Inc.	215-222-3000		
Pickett & Associates, Inc	863- 533-9095		
Pittman Glaze & Associates Inc	850-434-6666		
Platinum Surveying & Mapping, LLC	863-904-4699		
Point to Point Land Surveyors, Inc.	678-565-4440		
Polaris Associates, Inc.	727-461-6113		

# Additional Information

## Upcoming Events

**April 27, 2019**

Manasota & Charlotte Harbor  
Annual Golf Tournament and BBQ  
*Venice*

**May 3, 2019**

FSMS Board Meeting  
*Gainesville*

## Past Presidents

<b>1956</b>	Paul T. O'Hargan	W. Lanier Mathews, II
H.O. Peters	William G. Wallace, Jr.	Jack Breed
Harry C. Schwebke	Robert W. Wigglesworth	<b>2000</b>
John P. Goggin	<b>1980</b>	Arthur A. Mastronicola
R.H. Jones	Ben P. Blackburn	Michael H. Maxwell
<b>1960</b>	William B. Thompson, II	John M. Clyatt
Hugh A. Binyon	John R. Gargis	David W. Schryver
Russell H. DeGrove	Robert A. Bannerman	Stephen M. Gordon
Perry C. McGriff	H. Bruce Durden	Richard G. Powell
Carl E. Johnson	Buell H. Harper	Michael J. Whitling
James A. Thigpenn, III	Jan L. Skipper	Robert W. Jackson, Jr.
Harold A. Schuler, Jr.	Steven M. Woods	Pablo Ferrari
Shields E. Clark	Stephen G. Vrabel	Steve Stinson
Maurice E. Berry II	W. Lamar Evers	<b>2010</b>
William C. Hart	<b>1990</b>	Dan Ferrans
Frank R. Schilling, Jr.	Joseph S. Boggs	Jeremiah Slaymaker
<b>1970</b>	Robert L. Graham	Ken Glass
William V. Keith	Nicholas D. Miller	Russell Hyatt
James M. King	Loren E. Mercer	Bill Rowe
Broward P. Davis	Kent Green	Dale Bradshaw
E.R. (Ed) Brownell	Robert D. Cross	Lou Campanile, Jr.
E.W. (Gene) Stoner	Thomas L. Conner	Bob Strayer, Jr.
Lewis H. Kent	Gordon R Niles, Jr.	
Robert S. Harris	Dennis E. Blankenship	

## Advertise With Us!

All advertisements contained within the publication are published as a service to readers. Publication of the advertisements does not imply or express any endorsement or recommendation by FSMS. The rates are as follows:

Size	1 Issue	2-11 Issues
Inside Front Cover	n/a	\$525/issue
Inside Back Cover	n/a	\$525/issue
Full Page	\$720	\$395/issue
1/2 Page	\$575	\$320/issue
1/4 Page	\$290	\$175/issue
Business Card	\$120	\$100/issue

**Requirements:** Prices listed above do not include 7.5% sales tax; contracts for one year (11 issues) receive 10% discount if paid in advance; camera-ready copy (JPEG, PDF, GIF, PNG documents); new ads and/or changes are due by the 15th of each month for the following month's publication. It is the responsibility of the client to submit new ads or changes. If not received by the 15th of the month no ad change will occur for one month.

**Benefits:** Full color; hotlinks to your website added to your ad.

**Save the Date: July 24-27, 2019**  
64th Annual FSMS Conference  
*At the Caribe Royale in Orlando, FL*

# THE WORLD'S FASTEST GNSS RTK ROVER

## Leica GS18 T

Pushing boundaries with the world's first Calibration-free tilt compensating GNSS immune to magnetic disturbances.

Survey-grade positional accuracy can now be achieved in places previously not possible without requiring an offset measurement.

Learn more here:



**Leica**  
**Geosystems**

<https://goo.gl/gQE3qQ>



[www.FLTgeosystems.com](http://www.FLTgeosystems.com)



### FT. LAUDERDALE

800 PROGRESSO DR., FT. LAUDERDALE, FL 33304 (954)763-5300 • FAX: (954)462-4121

**1-800-327-0775**

### TAMPA

5468 56TH COMMERCE PARK BLVD., TAMPA, FL 33610 (813)623-3307 • FAX: (813)623-2100

WE'RE AN EQUAL OPPORTUNITY EMPLOYER

**1-800-282-7003**

### MARCH SPECIAL

GET AN ADDITIONAL

**10% OFF\***

**ALL STOREWIDE PURCHASES!**

FOR FSMS READERS

PROMO CODE:  
**FINALFOUR10**

\*Enter code at checkout. Applies to storewide online purchases: supplies, accessories, and instruments. Expires 03/31/19.