



## ENGINEERING FIRM SAVES TIME & LABOR ON JOINT USE INVENTORY WITH TRUPULSE RANGEFINDING TECHNOLOGY

Based in Richmond, VA, Timmons Group is an engineering and technology firm that specializes in GIS, civil, environmental and surveying services across the United States. One type of project Timmons Group regularly performs is joint use inventories.

In 2019, Timmons Group was tasked with conducting a joint use inventory for all electrical/telephone poles that are shared between two major corporations. As part of the inventory, they would have to collect precise attributional, locational and vertical measurement data.

### **THE PROBLEM** *Capture Precise Measurement Data for State-Wide Joint Use Inventory Without Using Hot Sticks*

The challenge? Collecting accurate data while maintaining efficiency. Each pole housed a variety of equipment, and Timmons Group had to inventory not only the locations of the poles, but also the total heights and attachment heights for the various pieces of equipment, as well as the different cables on each pole.

Timmons Group Project Manager, Dylan Sheets, knew this project would require specific equipment that could not only handle these challenges, but also work in the sometimes-difficult environments they would inevitably run into. To find what they needed, Dylan turned to Duncan-Parnell and Technical Sales Representative, Russell Vrhovac,

knowing their consultative approach would uncover the tools that would help boost his team's efficiency and accuracy.

### **THE SOLUTION** *Combine Sub-Meter Accuracy of Trimble R1 With Vertical Accuracy of TruPulse 200x Laser Rangefinder*

As a long-time Duncan-Parnell customer, Dylan and the Timmons Group team were familiar with their services and products and knew they'd have what was needed for this job. For this project, the team planned on using the Trimble R1 Bluetooth GNSS Receiver, which they already had experience with. The R1 would capture the sub-meter horizontal accuracy on each pole location, but they still needed something to capture high-accuracy vertical measurements.

For the amount of measuring that this project would entail, Dylan knew he didn't want to resort to using "hot sticks" – a time-consuming and labor-intensive method where the field teams need to have equipment in close proximity to live power lines to collect the necessary information. Between his research and Duncan-Parnell's recommendations, Dylan was guided towards Laser Tech Inc's TruPulse Rangefinding technology as a solution to this problem, because it would allow them to remotely measure height and connection points of various features on each pole.



The TruPulse 200x Laser Rangefinder would efficiently capture the complex, high-accuracy vertical measurements they had to collect. The small size of the rangefinder and its ability to harvest information entered into Esri's ArcGIS Collector made it a great option for this project. This was the first time Dylan had worked with Laser Tech's TruPulse technology, but since the equipment was so intuitive, it was easy to get acclimated, "Process of measuring multiple attachments on a pole is made much quicker and easier with [TruPulse] as opposed to using a hot stick for each measurement," said Dylan.

Even though Dylan and his team were using the R1 prior to this project, Dylan reports the learning curve for it to be very small as well, saying, "if you can work a Bluetooth speaker you can work with the R1." Additionally, to make the TruPulse even more user-friendly in the field, they mounted the rangefinder to a survey tripod, allowing them to conduct height surveys along with the positional surveys they were doing.

### **THE RESULT** *More Efficient Workflow & Confidence in Data*

"Engineering Firm Saves Time" continued...

Although this is somewhat of a typical project for Timmons Group, the last time they took inventory of these poles was about 20 years ago. Back then, the joint use inventory didn't involve measurements, so having the TruPulse 200x and R1 were critical in collecting the more in-depth data they needed this time around.

Today, the project is still ongoing, and Dylan is confident that these tools have saved him and his team significant time, "the entire team has felt the impact of working with these tools," he said. Since his team of around 10 to 20 people are measuring dozens of

poles a day, using these tools saves a lot of time and is much safer than the hot stick method.

After so many years of working with Duncan-Parnell, Dylan has been impressed with the effect the TruPulse Laser Rangefinders have had in combination with the R1, calling them "huge confidence boosters" for this project. Although the small learning curve allowed Dylan and his team to quickly implement the TruPulse 200x, he still relies on Russell whenever questions do arise, "Duncan-Parnell has been really awesome to work with and super responsive," he said. ■



## TECH TIP

# Getting Started with Trimble Connect and TerraFlex

To collect data in the field using TerraFlex, a map workspace must be configured in a Trimble Connect project. Before you get started with data collection in TerraFlex, here are a few things to note:

- These instructions apply to users who have been assigned TerraFlex User seats in the Trimble License Manager by the Trimble License Administrator
- Trimble Connect functionality will vary slightly based on the type of TerraFlex License used (i.e., Basic Annual or Advanced Annual)
- It is best practice to access Trimble Connect on a desktop computer and TerraFlex on a mobile device

### REQUIREMENTS

- ✓ A Trimble ID
- ✓ At least one TerraFlex subscription
- ✓ A GNSS Receiver for Real-Time Corrections (either internal or external depending upon the device to be used for collection)
- ✓ A data collection device (e.g., GPS Handheld Unit, Smart Device, etc.)

### STEP 1: CREATE A PROJECT IN TRIMBLE CONNECT

**WHY?** A project in Trimble Connect is the environment in which a user stores folders, map workspaces, templates and data. Setting up a project enables a user to invite other users to view/edit that project's data.

### STEP 2: CONFIGURE A MAP WORKSPACE IN TRIMBLE CONNECT

**WHY?** A map workspace is the platform used to configure the data collection project that will appear on the TerraFlex App.

### STEP 3: SET UP A POSITIONING PROFILE IN TRIMBLE CONNECT

**WHY?** To obtain real-time accuracy in the field, a positioning profile must be created in order for the GNSS receiver to process real-time corrected data for the TerraFlex data collection project.

### STEP 4: HARDWARE SETUP

*Note: If using a device with an integrated receiver such as a TDC150, skip to Step 5.*

### STEP 5: TERRAFLEX SETTINGS CONFIGURATION

### STEP 6: COLLECT DATA IN TERRAFLEX

### STEP 7: VIEW COLLECTED DATA IN TRIMBLE CONNECT

At this point, a Trimble Connect user is able to perform a variety of post-field collection workflows, including viewing and exporting data and creating to-dos/tasks (for TerraFlex Advanced User licenses).

**TO VIEW THE FULL VERSION OF THIS TIP WITH DETAILED STEPS, VISIT:**

<https://info.duncan-parnell.com/acton/media/23538/tech-tip-november-2021>



## Simplify Workflows with Our Flexible Printing Solutions

In addition to our Geospatial offerings, we also sell, lease and service large-format printers/ plotters and color office copiers to meet your printing needs. For added flexibility, we also offer our On-Site Print Solutions program (OSPS) that allows you to benefit from the latest engineering printing solutions without any incremental financial commitment. It makes in-house printing hassle-free, affordable and solves for technology obsolescence. Our wide format printing solutions include a variety of options, including printers from HP, Océ and Canon.

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or 704-506-0447 for more info



Ask us about the enhanced data security and advanced quality from HP's new PageWide XL Pro portfolio!

## Boost the Performance of Trimble Catalyst with the NEW Trimble DA2 GNSS Receiver

The Trimble DA2 GNSS receiver is the next generation receiver for the Trimble Catalyst GNSS positioning service. The DA2's performance scales with your Trimble Catalyst service subscription to deliver anywhere from centimeter to sub-meter precision to location-enabled Android and iOS field apps & workflows. Benefits of the DA2 GNSS Receiver include:

**Professional Performance:** The DA2 is custom engineered and powered by Trimble ProPoint GNSS technology, enabling it to work even in difficult GNSS environments.

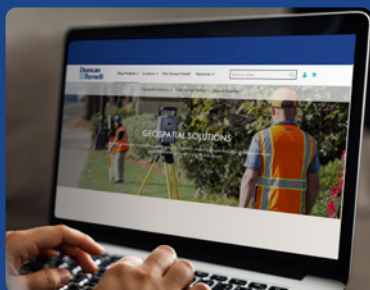
**Lightweight & Convenient:** As Trimble's smallest and lightest RTK-capable GNSS receiver at only 330g (<12 oz), the DA2 is small enough to carry anywhere. It can be powered in the field using a USB power bank or any USB-C equipped field device and has Bluetooth connection capabilities for a convenient user experience.

**Simply Precise Positioning:** The DA2 is compatible with any of the Catalyst service subscription levels, so one receiver can be used for all of your workflows – just choose the service level that matches your job and let Catalyst do the rest.

Contact your local sales representative for more information.



## NEW WEBSITE COMING SOON!



The Duncan-Parnell website is getting an exciting new look and will provide users with a more intuitive shopping experience and make it easier to find helpful resources and tools. Keep an eye out for the launch of the new site coming soon!

## News & Updates

### Spectra Geospatial FOCUS 50 Robotic Total Station Now Available

NEW

Powerful, easy-to-use, affordable and tough, the FOCUS 50 delivers high performance and versatility to tackle a variety of challenging and everyday surveying tasks. Choose from three models: Autolock, Short Range Robotic and Long Range Robotic.

### TBC v5.52 Available

Includes security for Trimble web services that have been enhanced to provide safe, continued support.

### Trimble 4D Control v6.2 Highlight: Alignment-Based Monitoring

Latest version of Trimble 4D Control software introduces alignment-based monitoring reporting and analysis and allows monitoring professionals to visualize, report and alarm on movement data relative to an alignment such as a road, tunnel, railway or bridge.

### New Firmware Version 4.22 for Spectra Geospatial GNSS Receivers: SP60, SP20, SP90m

Brings compatibility with new RTX beams. On RTX Wet/Dry map the coast-line is now allowed by default and the convergence time has been improved for RTX Field Point.

### Microdrones Releases mdCockpit 2021.4 Software

Features improved flight safety, changes to the folder structure and gives more options for surveying. This is a mandatory update for all users.

## EMPLOYEE SPOTLIGHT: MILES KELLY

Meet Miles Kelly – our new UAS Sales Representative. Miles has over eight years of experience in the drone industry supplying unmanned aerial systems for geospatial and government use cases.



He has expertise in providing aerial reconnaissance solutions that improve situational awareness. His favorite part of his role is using cutting-edge technology to solve his clients' everyday problems.

If you'd like to learn more about UAV technology for your business, contact Miles at [miles.kelly@duncan-parnell.com](mailto:miles.kelly@duncan-parnell.com)



# WAVELENGTHS

OVER 20 YEARS OF GEOSPATIAL NEWS / Fall 2021

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YOUR TRIMBLE SURVEY & MAPPING CONNECTION  
IN THE CAROLINAS, DC, DE, FL, GA, MD, TN\*, VA & WV

## Survey Hard-to-Reach Areas with Ease Using Drone LiDAR & Photogrammetry Systems



You already trust us with your surveying needs, and now we've partnered with Microdrones to provide you with an easy and comprehensive way to introduce aerial surveying into your workflows. More surveying and mapping professionals are turning to unmanned solutions to work better – from avoiding dangerous terrain to collecting high quality data in less time.

Microdrones' industry-leading UAV systems are designed with surveying workflows in mind. End-to-end LiDAR solutions combine drones, LiDAR and photogrammetry payloads with a fully integrated software workflow, optimized for land surveying.

### Key Features & Benefits:

- Capture ultra-dense LiDAR data quickly and safely – even in areas with high vegetation
- Easy end-to-end workflow: Plan → Fly → Process → Visualize
- Complete more projects in less time with higher accuracy
- Automated final point cloud processing using mdInfinity software

## Don't Forget to Take Advantage of Section 179 Tax Savings



Now is the time to invest in new equipment for your business! Section 179 is a tax deduction available to businesses that allows you to recoup some of the money spent on technology and capital equipment that is purchased and in-hand before the end of the year. Invest in new capital equipment before the year ends and save big with Section 179!

## Upcoming Events/Conferences

**DEC 8** Spectra GNSS Receivers: Hear from Real Users  
Live Webinar**2022****FEB 23 - 26** NC Society of Surveyors Annual Conference & Trade Show  
Pinehurst, North Carolina**FEB 24 - 25** SC Society of Professional Land Surveyors Convention & Technical Conference  
Columbia, South Carolina**NOV 7 - 9** Trimble Dimensions+ User Conference  
Las Vegas, Nevada