Duncan Parnell

WAVE LENGTHS

OVER 20 YEARS *OF GEOSPATIAL NEWS*
Late Spring 2021

GEODECISIONS COMPLETES VETERANS REMEDIATION PROJECT WITH HELP FROM DUNCAN-PARNELL AND TRIMBLE

Recently one of Duncan-Parnell's customers, GeoDecisions (Geospatial Technology and Consulting Firm based in Virginia), purchased our Trimble and Esri equipment to complete a unique project. With the help of Virginia-based GIS Specialist Russell Vrhovac, GeoDecisions was able to successfully and efficiently get the job done with a high level of accuracy. See below to read more about the project from the perspective of GeoDecisions' GIS Manager, Brett Jones.

"This was a large-scale data verification and remediation project for the Veterans Administration, which included processing of existing Burial Operations Support System (BOSS) database information. The project included in-person verification of over 700,000 veterans' internments between three firms over two years (nearly 50 cemeteries in 20 states). Project requirements required 5-megapixel pictures and sub-inch X, Y, Z locations for each internment. Due to these requirements, GeoDecisions decided on Esri's Collector for ArcGIS paired with a Trimble R2 RTK unit (Using Trimble's RTX correction service).

This setup allowed GeoDecisions to collect photos and immediately attach them to the internment, while also receiving real-time position corrections in the field.

Our team was able to collect over 95% of internments with sub-inch accuracy using this setup, with an average location time of under one minute. For areas with dense tree cover or against buildings, the GeoDecisions team used a Trimble M3 Total Station to collect the required field accuracy. If chosen for future projects, we would look to enhance these workflows using ArcGIS Field Maps."

If you're a municipality, engineering firm or other organization in need of GIS solutions, contact York Grow at york.grow@duncan-parnell.com to find the local expert in your area. We are happy to better understand your application and work to design a solution to capture and manage your data.

Five Tips and Tricks When Using GNSS Receivers

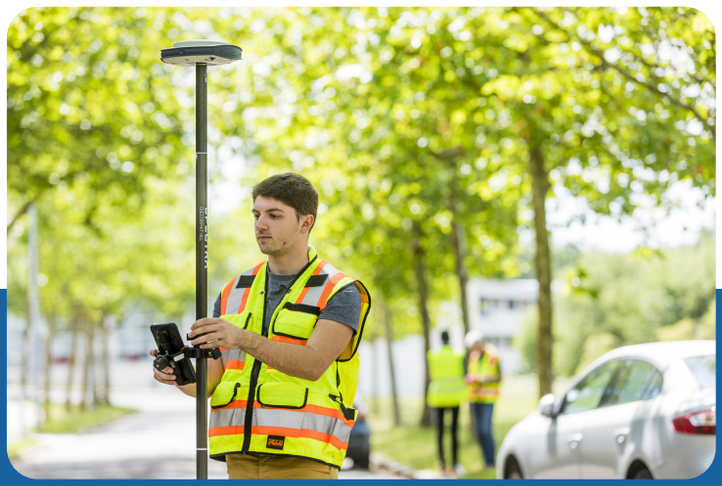
1. **Practice patience**
   If your GNSS receiver has gone unused for a week or more, it can take up to 15 minutes to establish a connection and download a new almanac. Be patient while this download occurs and expect that you will see the correct accuracies once the download has completed. You will not be notified that the download is complete, so it is best to wait up to 15 minutes.

2. **Your body can affect a GNSS signal more than tree canopy**
   When using a non-pole mounted receiver such as the Trimble R1, Geo7x, or TDC150, keep in mind that your body can prevent the receiver from seeing over half of the sky. It is best to hold your receiver away from your body and face towards the southern sky whenever possible.

3. **Understand the difference between HAW and MSL/Orthometric Height for elevation**
   There is no need to know all the math between HAE and Orthometric heights for elevation, but a basic understanding will save some major headaches back in the office. Height Above Ellipsoid (HAE) is an elevation based on a global model of the Earth's surface. GPS natively provides HAE elevations. The problem with HAE is that the model used is far too general and does not provide accurate local elevations. We can apply a GEOID correction to that HAE to get a more accurate elevation based on a local model. This value is an Orthometric Height or Height Above Mean Sea Level (MSL). Your sales rep or support team will be happy to assist in confirming you are applying the correct GEOID correction.

4. **Pay attention to datums and coordinate systems**
   GPS is natively broadcast in WGS 1984. 90% of GIS data is in a coordinate system with a local datum. Pay attention to the coordinate system of the data being collected and that of the target data. When correcting the data, whether a local real-time service or post-processed, it will be corrected against a coordinate system with a local datum. Generally, this will match your GIS and no issues should arise. However, it is wise to keep an eye on the different coordinate systems and datums being used.

5. **Bluetooth receivers only broadcast about 30 feet**
   When using a Bluetooth receiver such as the Trimble R1 or an R2 in a BYOD workflow, keep in mind that the Bluetooth range is about 30 feet. You have a lot of flexibility when using a BYOD workflow but getting disconnected from the receiver can cause headaches in the field. Do not stray too far from your BYOD device.



Want more tips?

Visit https://duncan-parnell.com/blog to get the full article.

Need Rental Gear?

With a vast selection of survey and mapping equipment available for rent, we can help address your specific project needs.

- **Latest technology**
- **Daily, weekly & monthly rates**
- **All pieces inspected & recalibrated**

SOME OF OUR RENTAL TOTAL STATION EQUIPMENT INCLUDES:

Trimble S5 Robotic Total Station, Trimble SX12 Robotic Scanning Total Station, and more.

Contact your local sales rep for more information.

News & Updates:

Trimble Access 201.00 Support for TSC5
Trimble Access 2021.00 was released in February and includes support for the new Trimble TSC5. To install Trimble Access, run the Trimble Installation Manager which is preinstalled on the TSC5.

TBC v5.40.1 Now Available
A patch is now available for Trimble Business Center v5.40.1.

Trimble Survey GNSS Firmware Version 5.50/6.10
This firmware version includes fixes and enhancements to the Survey Receiver Firmware. For best results, users should upgrade to Trimble Access 2021.00.

Trimble X7 Firmware v2.2.42
Now Available on Trimble Installation Manager. The firmware update supports the new Trimble Perspective Mobile app and several general improvements.

Ranger 7 Operating System Update
An operating system update is available for the Spectra Geospatial Ranger 7 controller. All users of these devices are encouraged to update to the latest operating system to take advantage of the enhancements.

Employee Spotlight: Meet Charlotte Davis

Meet Charlotte Davis – our newest Geospatial Trainer. Charlotte holds a Bachelor's degree in Political Science and a Master's degree in Public Administration both from Columbus State University along with a Geographic Information Systems (GIS) Certificate from Troy University. Charlotte has seven years of experience, five of which have been immersed in the GIS field. Her mapping and GIS knowledge base was built on using ArcGIS Desktop, ArcGIS Online, and ArgGIS Pro. What Charlotte loves most about her role as a trainer/supporter specialist at Duncan-Parnell is that it nurtures a harmonious convergence of her passion for continual learning and for helping people.

Providing Expertise and Technology Solutions for Your Monitoring Project

Trimble Monitoring applications provide streamlined workflows to set up, monitor and report on regular control and deformation surveys. Expanding your business into monitoring or taking on a monitoring project requires time, guidance and a good partner. With Duncan-Parnell you get all of those – making us a one stop shop!

We've always offered great geospatial products from Trimble, but now we also provide Trimble's line of geotechnical sensor systems powered by World Sensing, as well as Senceive products. Duncan-Parnell can help guide you in adding monitoring to your business to grow projects and build even stronger relationships in combination with our products.

Visit www.duncan-parnell.com/geospatial-solutions/monitoring for more information.

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Duncan-Parnell, Inc.
900 S. McDowell St.
Charlotte, NC 28204

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In This Issue

Trimble Authorized Distribution Partner

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

NEW – Trimble TSC5 Controller Adds Efficiency To Your Project Through New Data Collector Technology

The Trimble TSC5 Controller is an Android-based survey controller featuring a five-inch screen and full keyboard – ensuring fast, efficient operation, even while wearing gloves. Rugged yet lightweight, with all-day battery power, the TSC5 is easy to carry and easy to use. Key features at a glance:

5-inch touchscreen: Multi-touch screen for finger, stylus or glove and bright, anti-glare display that helps you get more done in sunlight and low light conditions

Connectability for efficient data collection: Worldwide WWAN with hot spot capability, AT&T and Verizon certified

12 programable function keys and Shift & AGr key combinations: 12 physical function keys, plus additional Shift & AGr key combinations provide even more options to speed up common workflows

Contact your local sales rep for more information.

Congratulations to Earl Soeder, Duncan-Parnell's South Florida-based Survey Rep for being awarded with the Steven Woods Exceptional Volunteer Award presented by Florida's Surveying and Mapping Society. Earl has proven to be one of their most active members who has given consistent effort and dedication.

Upcoming Events/Conferences

JUL 15 Survey and Mapping Society of Georgia Conference
Jekyll Island, GA

JUL 25 South Carolina Association of Reconstruction Specialists Southeastern Conference
Mount Pleasant, SC

AUG 10 Towson University GIS 2021
Virtual

AUG 11 Tennessee Association of Utility Districts Business Conference
Gatlinburg, TN

AUG 15 Kentucky and Tennessee Water Professionals Conference 2021
Chattanooga, TN