



CUSTOMER STORY | NOV 2017

Roman Ruins Modeling and Virtual Tour Aided with Spectra Precision SP60.

Paphos, Cypress, (August 2017). Students from AGH University of Science and Technology in Krakow, Poland recently combined archaeology and geodesic disciplines to inventory monuments at Cypriot Kato Paphos Archaeological Park, an important UNESCO World Heritage site. Using advanced measuring equipment and spatial information systems, the students developed their survey skills using the SP60 while collecting data for the creation of spatial models and virtual tours of the famed site.

The students used a Spectra Precision SP60 GNSS receiver, supplied by NaviGate Sp. z o.o., and together with Trimble RTX technology met the three principal goals of the summer expedition.

Since the park's archaeological discoveries had previously been documented using a local coordinate system, the first task was to use the SP60 to convert the coordinates of the geodetic matrix into the global coordinate system.

The second task was to build a data set for integration with a terrestrial laser scanning effort to construct spatial models of selected monuments. In just one day, the students collected data from several dozen scanner stations, and with SP60 measurements, they were able to assign geo-references to the registered clouds of points



Highlights

- The SP60 was used to convert the coordinates of the geodetic matrix into the global coordinate system.
- Build a data set for integration with a terrestrial laser scanning effort to construct spatial models of selected monuments
- Only one day was needed to collect data from several dozen scanner stations.



The third student task for the SP60 was to obtain, with the aid of Trimble RTX technology, the data necessary to integrate with the information supplied by spherical cameras to visualize publicly accessible monuments, including the Agora, the Acropolis, the Odeon, the Asclepeion, the House of Dionysus, and Malloutena. Measuring the coordinates of the listed monuments proved to be both fast and easy for the students. Back at the Krakow campus the students plan to integrate the collected GNSS data with the 360 degree panoramas to create a virtual tour of the archaeological park.

The accuracy of the Spectra Precision SP60 receiver was tested by the students using two measuring bases consisting of 30 and 55 control points. The bases were located so that measurements could be taken in both optimal and sub-optimal partially-obstructed horizon conditions. Four series of measurements were taken for each base on different dates and different times of the day. The measurements and subsequent analyses confirmed that the Spectra Precision SP60 coupled with RTX technology ensures a very high reproducibility of measurements. Average variations in coordinates were all within four cm, and the initialisation times to achieve four-cm accuracy were almost always within 30-40 minutes.



About

About the SP60 GNSS receiver

The Spectra Precision SP60 offers a high level of flexibility to cover any demand from GIS all the way up to sophisticated RTK and Trimble RTX™ capable solutions. Combining the unique all-signals tracking and processing Z-Blade GNSS-centric technology and L-band capability for satellite-delivered Trimble RTX correction services, the SP60 receiver provides the most reliable measurements and the highest possible accuracy under any conditions anywhere in the world.

About AGH University

AGH University of Science and Technology (Polish Akademia Górniczo-Hutnicza im. Stanisława Staszica) is a technical university in Poland, located in Kraków. The university was established in 1919, and was formerly known as the University of Mining and Metallurgy.

About Navigate Ltd.

Headquartered in Krakow, Navigate, Ltd. is a principal distributor of Spectra Precision survey and GIS products in Poland. The company specializes in the development of GIS and LS software.

About the Spectra Precision Brand

Spectra Precision is an established brand known for delivering quality products to the construction market.

Focusing on the specific needs of the conventional surveying market, the Spectra Precision brand offers a complete product portfolio including Global Navigation Satellite Systems Geographical Information Systems, optical total stations, data collection hardware, field and office software, as well as a wide range of construction tools. Spectra Precision surveying equipment is an economical choice that utilizes technologies for optimal efficiency.

With convenience and reliability as the foundation of the Spectra Precision brand, it is an ideal choice for value. The Spectra Precision brand is backed with the strong technical support that users have come to expect from a quality name in surveying and construction.

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