

Leica Geosystems **TruStory**

Lyonnaise des Eaux chooses Leica Zeno CS25 for its network



■ Companies

Lyonnaise des Eaux is a subsidiary of **Suez Environnement**, one of the world leaders in water and waste management. With 11,300 employees, it is number 2 in France in providing communities with purification management.

www.lyonnaise-des-eaux.fr

Geosystems France distributes software solutions for handling satellite and aerial images and LIDAR data. Geosystems France expanded its range in 2011 to include GPS GIS solutions from the Leica Zeno range. www.gps-sig.fr (French)

■ Challenge

To perform geo-referenced surveys of points on networks for drinking-water distribution and purification with an accuracy of 40 cm in XYZ in order to meet the DT-DICT work declaration decrees. The project involves 70 units at a national level.

■ Solution

Geosystems France offers a GPS solution from Leica Geosystems to acquire high-precision GNSS data with real-time differential correction.

■ Hardware and Software

- Leica CS25 GG02plus
- Leica DISTO™ D8 laser distance metre
- Leica Zeno Connect
- Integration with STAR-APIC GIS
- Access to the GLONASS system
- Orphéon subscription

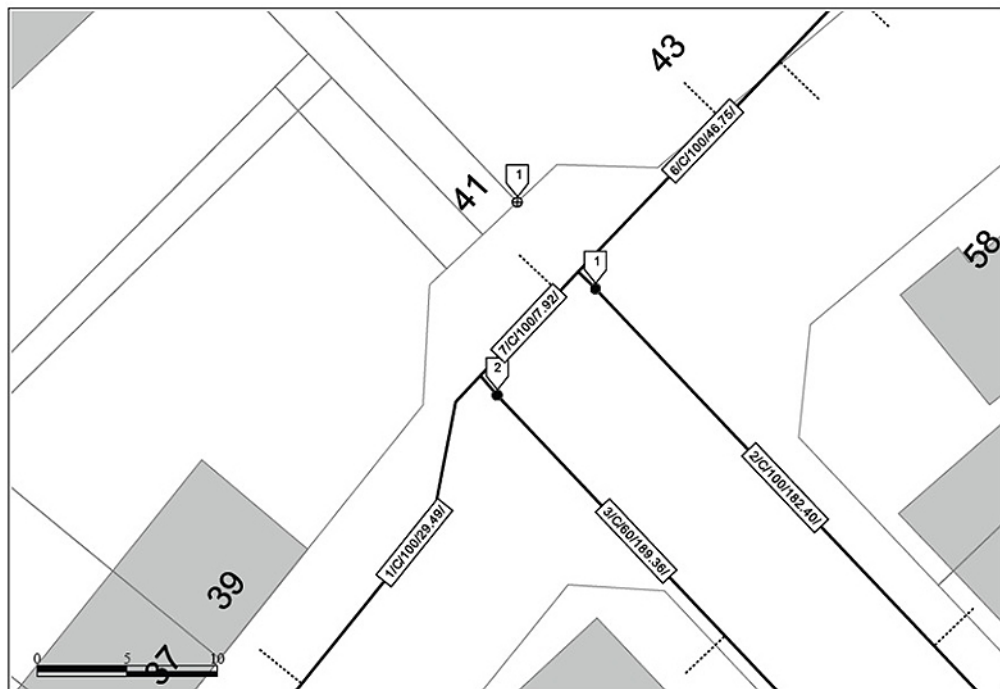
Lyonnaise des eaux provides 12 million residents with drinking water and cleans waste water for more than 9.5 million people in France. Involved throughout the entire great water cycle, the company works with communities, residents, property holding administrators, industries and farmers to ensure efficient and respectful management of water and the environment. Water health is the company's primary concern.

For some years now, in order to guarantee the safety of construction sites within the public domain or on private property and also to limit the risk of accidents, those managing underground networks (water, gas, electricity, etc.) must register and update areas where they install networks and carry out works using a unique online service. Any project work near to

these networks also requires a work declaration (DT).

It is against this backdrop that Lyonnaise des Eaux has opted to acquire a geolocation solution for the drinking-water distribution network and purification. The solution must permit geo-referenced surveys of points on these networks with an accuracy of 40 cm in XYZ in order





Result

- When asked “What did you think of the complete solution offered to you?”, Mr Nicolas Julien, Head of Projects – Technical Management at Lyonnaise des Eaux answered:
- “An initial version was delivered in July 2013, and a second in January 2014. The solution proved easy-to-use and allowed “non-expert” personnel to produce precise network mapping in a single attempt. This makes these operations easier and allows them to be completed in-house at a cost compatible with public service requirements: the cost of water is accessible to everyone”.

to meet the requirements of the DT-DICT work declaration decree.

Geosystems France, distributor of the Leica Zeno range from Leica Geosystems for GIS, offered Lyonnaise des eaux a complete solution.

The equipment selected was the Leica CS25 tablet PC with dual-frequency GG02plus antenna receiver on a 2 m carbon telescopic pole with spherical level. A Leica DISTO™ D8 laser distance meter with pole mounting kit rounded off the selection.

The positioning information comprises two main steps: the generation of GPS points and their connection to the various parts of the network (existing or to be created). The GPS link provides points with a precise position with no link to the mapped network necessary because the application links to the position

of the corresponding water pipe directly. The solution chosen was able to be tested on-site in the north of France in order to update the water network map. The GNSS GG02plus receiver was able to detect the satellites. It is equipped with real-time differential correction via 3G connection to provide a precise X, Y, Z reference with an accuracy of 10 cm. The “rugged” Leica CS25 tablet connects to the GNSS receiver via Bluetooth and features the Star Apic GIS. Leica Zeno Connect enables points to be recorded directly on-site in real-time. The Leica DISTO™ D8 distance meter, also connects to the tablet via Bluetooth and provided relative distance measurements.

The aim of the GPS application is to enable the input of points recorded on-site (in “onboard” mode) such as network valves using the GPS antenna connected to the tablet PC or in relative mode using the laser

distance meter.

Once the surveying work on-site is completed, the operator can transfer the data to the office and integrate it into his GIS, after which he is able to create new verified objects and modify the existing layout. He is then in a position to use all the data taken on-site to meet the submission requirements by supplying a plan within the framework regulations for construction without destruction.

