



Network news



From left: Shane 'Trap' Traffanstedt, John Dudley, Adam Arrington.

Birmingham, Alabama-based Topcon dealer Earl Dudley, Inc., owns and cooperatively operates 80+ separate reference stations as part of a four-state network RTK effort it calls iNET. With additional stations being added almost weekly and new markets evolving for the highly-accurate RTK data, the future for the company – and the technology – looks extremely promising.

“We saw the tremendous benefits a CORS-type network could provide and knew that this was a technology we really wanted to pioneer here in the southeast,” said Adam Arrington, Earl Dudley Inc. vice president. “To do that, we had to reach out to the surveyors and prove how this could improve their onsite productivity. With network RTK, we said that within a minute of getting onsite, they could have a survey-grade position, certified to lat/long, elevation and state-plane coordinates – a day’s worth of their work done in a minute.

Company: Earl Dudley, Inc.

Location: Birmingham, Alabama

Project: Establish and develop regional CORS network

Location: Throughout Alabama, Tennessee, Mississippi and Georgia

Topcon Products:

GRS-1 GNSS integrated rover system;
Odyssey-RS and Net G-3 receivers
TopNET software

Topcon Dealer:

Earl Dudley, Inc.
Birmingham, Alabama
www.earldudley.com

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AT WORK

Network news

'With network RTK, we said that within a minute of getting onsite, they could have a survey-grade position, certified to lat/long, elevation and state-plane coordinates – a day's worth of their work done in a minute. In most cases, that's all it took to convince them.'

– Adam Arrington, vice president, Earl Dudley Inc.

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In 2000, about a year after first looking into establishing a network, Earl Dudley made its first substantial investment to lay the groundwork for iNET, purchasing a number of reference stations from its then-equipment supplier.

"We were initially a Leica dealer, so a good number of the stations installed in the early-to-mid part of the program are from that manufacturer. However, due to a change in circumstances, we became the Topcon dealer for the area. That could have been a real setback to our network effort, but instead proved a blessing in disguise: Topcon was outstanding in their immediate commitment to help us continue growing the network. In some cases we left the stations as they were. In others we removed the older equipment and replaced it with new Topcon gear."

One of the things the Dudley team quickly realized was that intermixing different brands yields different performance. That opportunity to operate networks from two different manufacturers – in many cases providing duplicate coverage – has proven to be a real plus from a standpoint of performance testing, comparisons and contrasts of software capabilities, etc.

Arrington says Topcon has really gotten behind their efforts with iNET, both in terms of straightforward technical support and by allowing Dudley to access some of Topcon's latest technology like the NET-G3 receiver which can not only access GPS and GLONASS, but is also designed to track the Galileo constellation of satellites when it is up and running.

"Because of the improvement of radio technologies and as construction professionals learn more about how a network like iNET can benefit them, we are already seeing an increased acceptance of network-based 3-D machine control," he says. The same holds true for survey-grade GIS. A consultant hired by Hillsborough County near Tampa Bay located – to survey grade accuracy – more than 85,000 manholes in a year and half. They took a project that would have been economically unfeasible using traditional means and workforce, and made it do-able with network RTK.

"We are really excited about the future of iNET and feel that it, and other GPS networks like it, represent the future of geodetic control."



Traffanstedt operates Topcon's GRS-1 receiver and field controller.

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Topcon's TopNET

A wide range of functionality that is also scalable from a single site to networks covering a large geographical area.



- Supports GNSS operation
- Scalable solution in both functionality and geographic coverage area
- Easily upgraded to operate from one to hundreds of Reference Stations
- Reference Stations easily added to expand Network and geographic coverage area
- Functionality for Continuously Operating Reference Stations (CORS) to modeled network data corrections easily added
- Communication to Reference Stations via internet, modem, USB or serial