

VRS Two Years On

In the Insider's View of November 2006 I wrote about the participation of my firm in a newly established GPS RTN (VRS) network in the Washington, DC-Baltimore metropolitan region (see <http://vrs.keynetgps.com>) and noted the anticipated impacts on corporate survey operations from implementing this technology. This column provides an update.

Productivity Gains

Our company currently operates 33 VRS capable rovers and owns three base-stations in the VRS network. The network is structured as a privately funded participant network in which the Trimble dealer and several large engineering firms own the base-stations. The US National Geodetic Survey and the Corps of Engineers also provide real-time data access to a limited number of CORS stations for use as part of the network, in return for access to data generated by certain of the private base-stations. Overall productivity gains using VRS in the network interior where cellular connections are strong averages 40%, whereas in the more rural, hilly outlying edges of the network where cellular coverage and signal strength is more intermittent the average is 26%. For certain types of work, such as construction rough stakeout and boundary survey control, some offices have achieved a 65% gain in productivity.

Unexpected Impact

One particularly useful function is that VRS provides a powerful tool for integrating the multiple historical horizontal and vertical datums encompassed in the modern regional infrastructure and environmental projects spanning municipal, state and federal boundaries. Monthly VRS Users Group meetings and the Team Share website have proven popular and effective for disseminating update information on the use of GPS, company-wide standardisation efforts, lessons learnt concerning best procedures, and archiving informative reference materials. An unexpected impact of implementing standardised surveying procedures supporting VRS was precipitation of an extensive and comprehensive study focusing on automation and integration of engineering CAD design and survey software used by land-development offices. A nine-month study has just been completed that incorporated teams of surveyors and civil engineers from all regional land-development offices. Software recommendations have gone forward to the CEO for final approval, and pilot projects and implementation plans are now being formulated.

New Synergies

The implementation of VRS by the surveyors at Dewberry has not only had a significant impact on survey productivity but has also created new synergies and awareness of the need for increased standardisation of processes between surveyor and civil engineer. Workflow analyses for each discipline and their modes of information interchange and transfer of work control during different phases of a project's data lifecycle are now emerging, prompting expectations of increased efficiencies. What began as a transformation process in the surveying group has now expanded to general land-development processes in the company.