

StreetMapper Passes the Test

The world's most accurate mobile mapping system StreetMapper, has achieved accuracies of less than 1cm on a test area specifically designed to evaluate mobile laser scanning systems. Operated by Terrametrix, LLC and designed by UK based 3D Laser Mapping the StreetMapper system was put through its paces on a stretch of highway in San Diego. The route was chosen by the Californian Department of Transportation (Caltrans) to help companies advance mobile laser scanning technology through independent evaluation against known control points.

"For years we have been anticipating this technology in hopes that it could collect high accuracy pavement data, allowing us to remove one of the riskiest tasks from our work," commented Dave Olander, Field Survey Officer for Caltrans. "The test area was designed for anyone working on mobile laser scanning to have an area to evaluate their systems and supports other projects we are working on to advance developments in mobile laser scanning technology."

The Caltrans test area covers a half-mile stretch of High Occupancy Vehicle (HOV) lane highway in San Diego. The route was originally selected as it was accessible to field crews to establish the control points and offered a variety of traffic conditions to 'test' the mobile mapping systems performance in real world conditions. The route also had changes in elevation and obstructions (signs and overpass) to further challenge the systems. A two-lane section of the highway was measured by Caltrans using calibrated, high accuracy surveying equipment and techniques in order to establish the 1,500 plus control points.

Using StreetMapper Terrametrix surveyed the test area in just 45 minutes and raw processed data was delivered to Caltrans and University College Davis for inclusion in a mobile terrestrial LiDAR study. Initial reports are very positive showing a RMS error report as follows: Number of Control Points 1567, Average dz -0.003, Minimum dz -0.052, Maximum dz +0.061, Average magnitude 0.018, Root mean square 0.022, Standard deviation 0.022.

"StreetMapper continues to deliver highly accurate survey results both on real world projects and in the test environment," commented Michael R. Frecks, Terrametrix, LLC President. "With clients experienced in data from static scanners our challenge is to prove the benefits of faster and safer data collection provided by the mobile system. Having achieved accuracies of less than 1cm on a test area that offers real world conditions and challenges StreetMapper has once again proven its place in surveyors toolkit."

StreetMapper has been specifically designed for the rapid 3D mapping of highways, runways, railways, infrastructure and buildings using vehicle-mounted lasers. Travelling at normal road speeds, StreetMapper offers a 360-degree field of view with high precision mapping to a range of 300 metres. Capturing every detail along the highway corridor including barriers, gulleys and overhead wires, surveyors can create highly accurate 3D computer models for planning, maintenance, wide load route assessment and post-incident investigations.

Notes for Editors:

StreetMapper

StreetMapper has been developed by 3D Laser Mapping in conjunction with German guidance and navigation specialist IGI mbH and technology company Riegl. The system employs the latest laser scanning technology for improved field performance and accuracy, precision navigation including a solution for reduced GPS coverage in urban areas, combined with a flexible, modular configuration and increased ease of use and deployment.

3D Laser Mapping

3D Laser Mapping is a global developer of laser scanning solutions for sectors such as mapping, mining and manufacturing. 3D Laser Mapping specialises in integrating laser scanning hardware with their own software and peripherals to create solutions at the cutting edge of technology. Through a worldwide network of distributors 3D Laser Mapping is able to provide frontline support and service for a growing international client base. For further information see www.3dlasermapping.com

Terramatrix

Terramatrix, LLC is driven by the extensive experience Michael R. Frecks has in high tech 3D laser scanning as both an innovator in the industry as well as a consultant and advisor for its software development since 2000. Data collection experience and expertise is extensive in both the transportation and architectural disciplines. As a professional Land Surveyor since 1992, Michael's approach to data documentation combining GPS, 3D laser scanners and INS, makes his approach more accurate, safer, faster, and cost efficient. His vast knowledge of scanner specifications; identifying software and hardware capabilities, how they interact with each other; beta testing of equipment and software; and his demand of high accuracy standards has advanced the evolution of acquiring as-built data documentation through 3D laser scanners. For further information see www.terramatrix3d.com

Caltrans

Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans carries out its mission of improving mobility across California with six primary programs: Aeronautics, Highway Transportation, Mass Transportation, Transportation Planning, Administration and the Equipment Service Center. For further information see www.dot.ca.gov