

Highway Surveying Project Costs Halved

Dutch surveying company Geomaat is capturing millimetre-accurate measurements in record times to support a range of highway design, construction and maintenance projects. Using the mobile laser mapping system StreetMapper, and specially developed point cloud software, Geomaat can calculate highly accurate cutting, milling and asphalt figures, create as-built models and undertake change detection.

Jolle Jelle de Vries, Managing Director of Geomaat, said that in the past these types of measurement were undertaken using total stations which was time-consuming, and therefore costly, and had a big impact on other road users. For example a 10km-stretch of highway would have taken at least 20 nights to survey, each night requiring extensive traffic management measures or road closures. The resulting measurements would then have taken about a week to process. Using StreetMapper, a new design can be delivered in less than a week from start to finish.

“This is a huge advantage in itself – we estimate savings for our clients of up to 50 per cent,” he continued. “However, the benefits do not end there. Using StreetMapper we measure everything, in 3D, within a 300-metre corridor of the survey vehicle. Unlike traditional surveying techniques, this means we never have to revisit the site; we can just extract extra points if and when needed.”

Recent projects undertaken by Geomaat that have benefited from the use of the StreetMapper mobile mapping system include a project to upgrade the A50 motorway between Ewijk and Valburg on behalf of the Rijkswaterstaat (an executive of the Ministry of Infrastructure and Environment), a project to upgrade the runway at Johan Adolf Pengel International Airport, and surveying over 500 kilometres of highway in support of LEM Contracts (Lifetime Maintenance). Using StreetMapper, Geomaat is also hoping to work with municipalities to support the introduction in 2012 of a new BGT (Basic Registration History and Topography) law.

StreetMapper has been specifically designed for the rapid 3D mapping of highways, runways, railways, infrastructure and buildings. Using vehicle-mounted lasers offering a 360-degree field of view, StreetMapper enables high-precision mapping to a range of 300 metres, a capacity of 550,000 measurements per second per sensor and recorded accuracies in independent real-world projects of better than 10 millimetres.