

Road-Scanner in the word: survey in Japan

Client: ASCO Co.Ltd, Japan

Is a general construction consultant based in Osaka, and has always been a pioneer of cutting edge 3D surveying technologies, including Laser Mobile Mapping. During Intergeo in October 2014 the CEO Mr. Masato Banjo and the technical team were positively impressed by the Siteco Road-Scanner mobile system.

The project

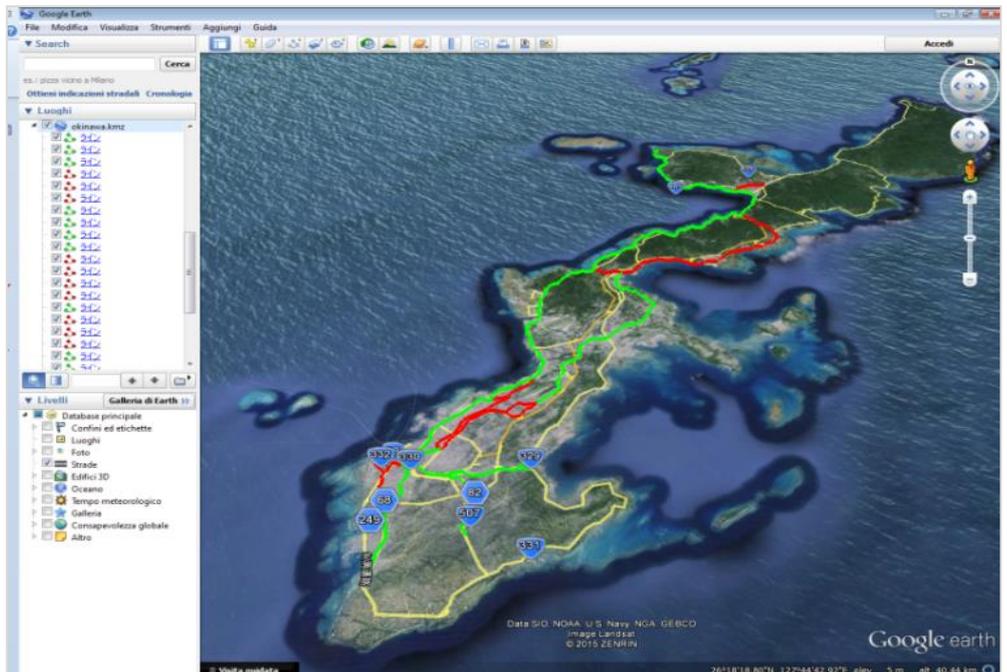
At the end of 2014 ASCO started to deepen the system features and to test the data sets obtained and fixed a meeting at the Siteco's facility in Bologna, Italy, at the beginning of March, to carry out a full demonstration of the system, and of its complete workflow. Suddenly, at the beginning of February ASCO was required to survey more than 100 km on the Okinawa Island, in south Japan.

The features of the Mobile Mapper already owned by ASCO were not matching the requiring specifications by the Okinawa road authorities: that was the right chance to check the Road-Scanner flexibility and efficiency on the field.

The survey was a complete success and ASCO immediately placed a purchase order for the system. The Asco engineers, who were surprised at the ease of operation and data processing, were fully trained throughout the four day survey deployment. The RoadScanner4 system is being deployed immediately throughout Japan.

The survey mission

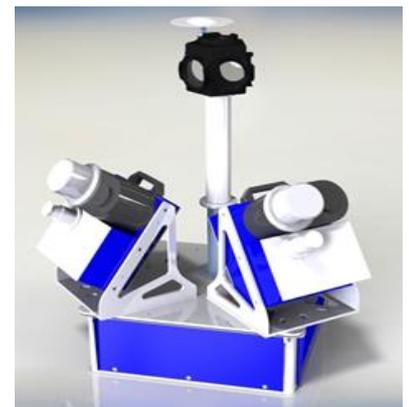
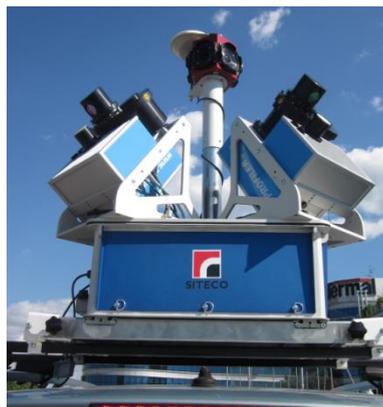
In just ten days, thanks to its simple packaging and mounting equipment, the Road-Scanner system was shipped to Okinawa, adapted on the Asco car and the survey was achieved on the national highway crossing all the island.



System configuration

The Road-Scanner4 configuration included :

- Inertial Navigation System IXBLUE LANDINS
- Laser Scanner Z+F Profiler 9012
- Spherical Camera LabyBug 5 (6x5 Mpx resolution)



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Post-processing

In just 2 more days the survey was completely post-processed.

The differential correction has been carried out with 3 permanent GNSS stations of the national geodetic network. The final trajectory has been computed with the Grafnav GNSS software and the IXBLUE Delphins Kalman filter software with Loosely Coupled algorithm.

The final geodatabase including the trajectories, the Ladybug spherical images and the georeferenced point clouds was exploited with the Road-SIT Survey software, developed by Siteco.

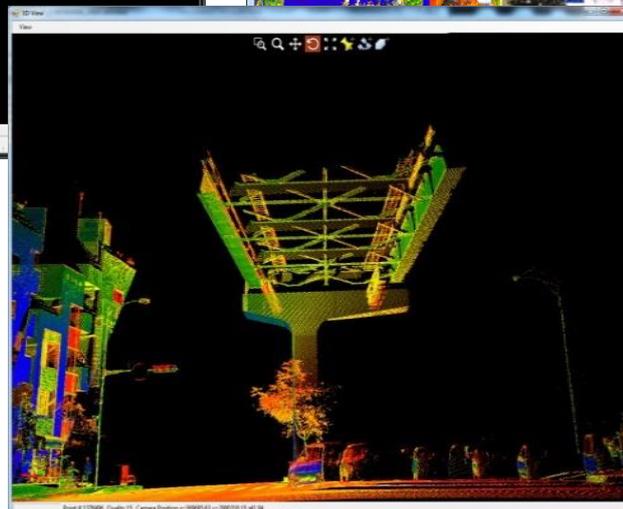
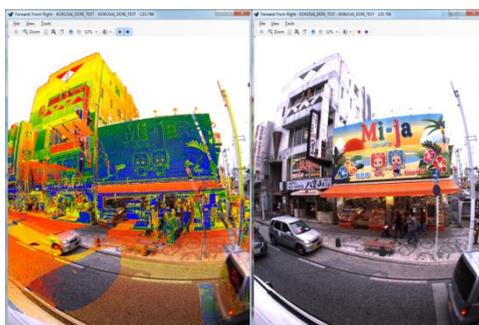
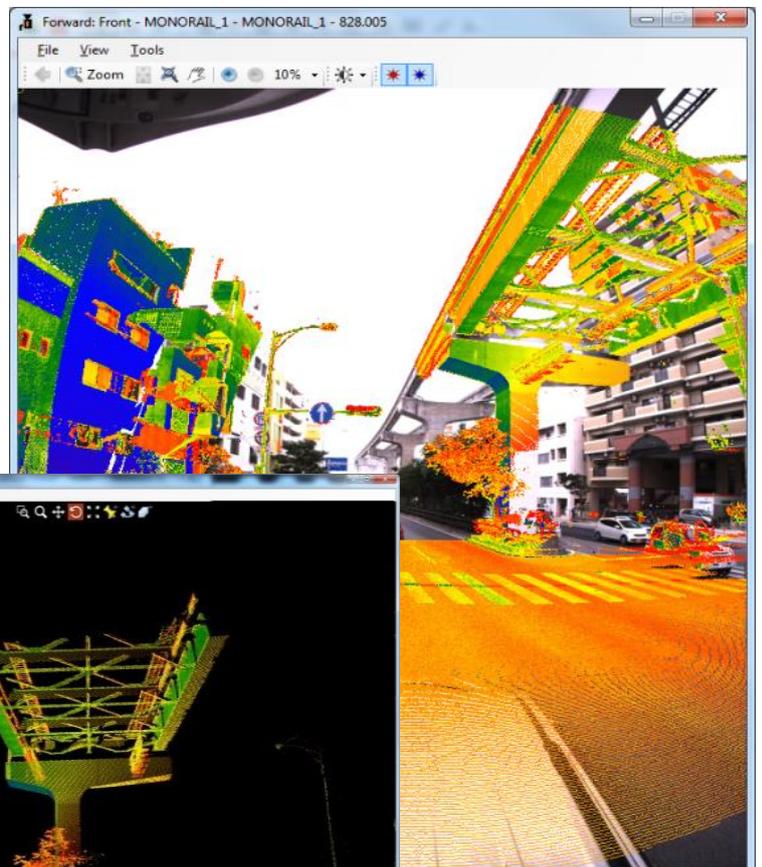
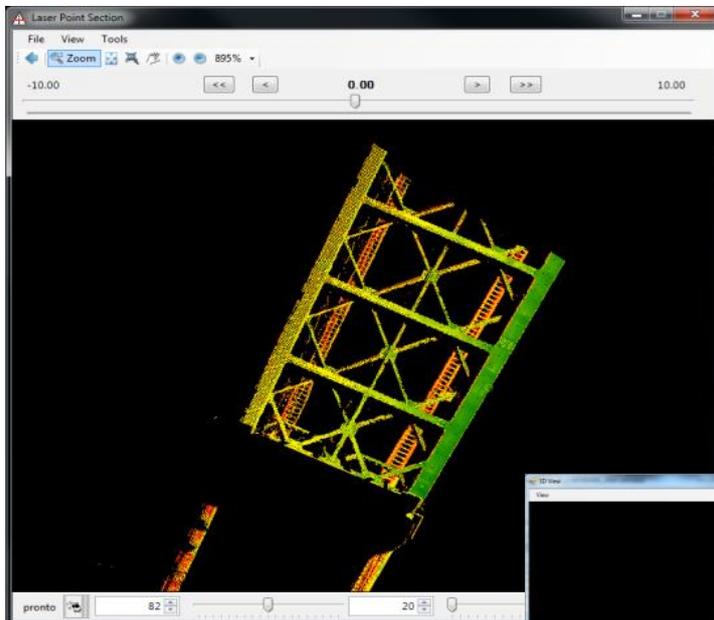
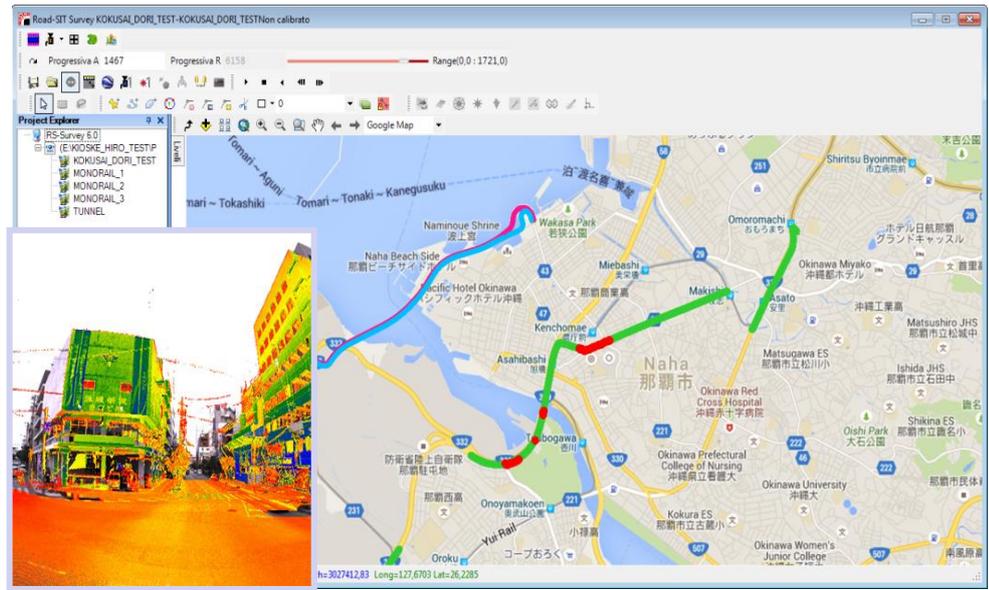
All the data were exported in the proprietary format of the ASCO application for mobile mapping data display and management.

Thanks to that ASCO could produce the final deliveries requested from the local Authorities for the whole highway:

- Georeferenced movies and point clouds
- Measurements of the road and roadside assets
- Cross sections
- Infrastructure 3D models
- Digital Surface Model

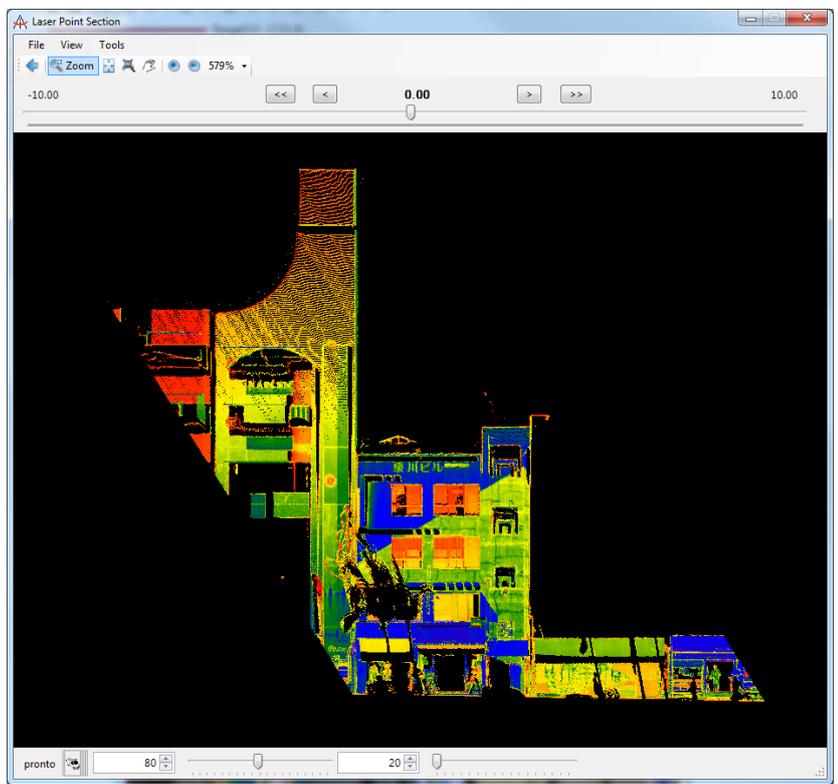
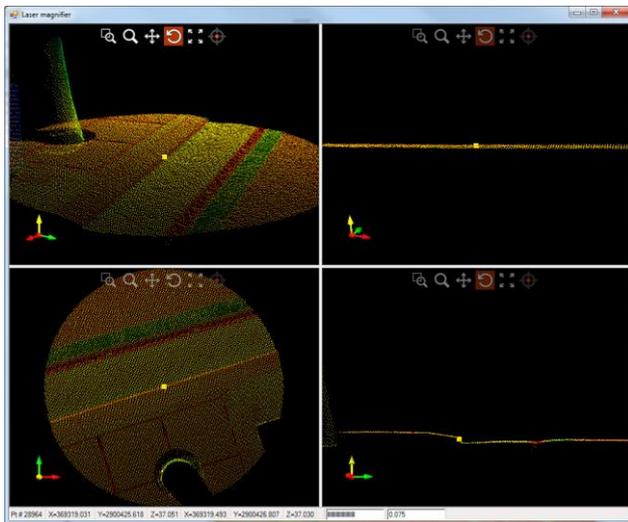
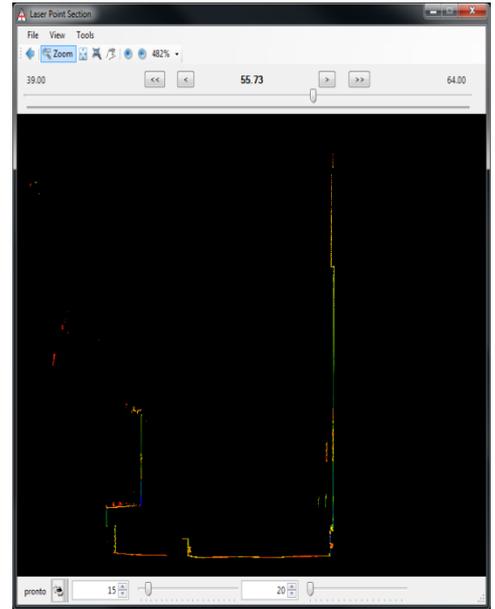
Examples and deliverables

1) Road-SIT Survey user interface to display the imagery and the point-clouds

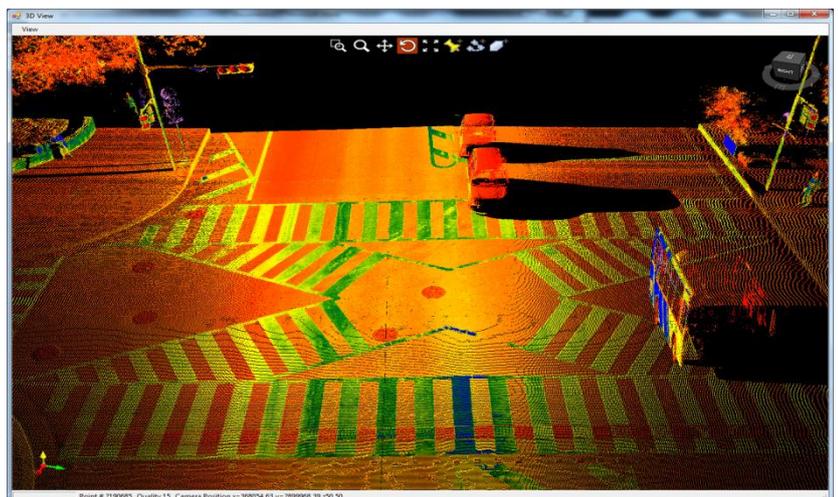
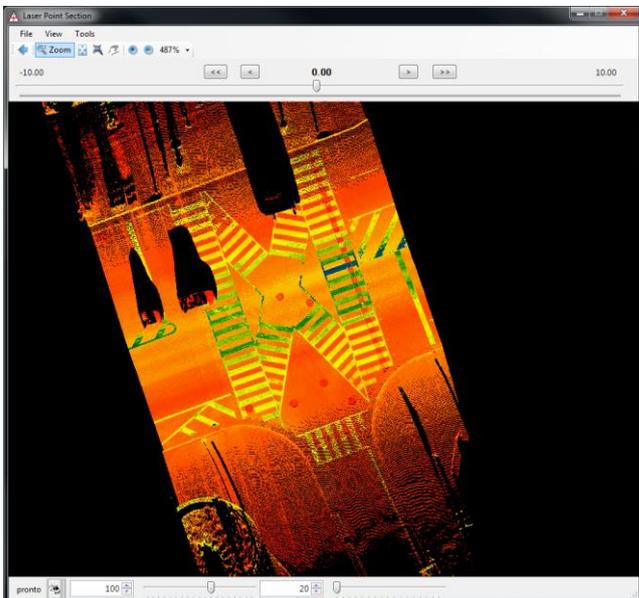


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2) Cross sections and laser magnifier for fine point selection



3) 3D images of the point clouds with color rendering of reflectivity to enhance the markings



Road SIT SURVEY

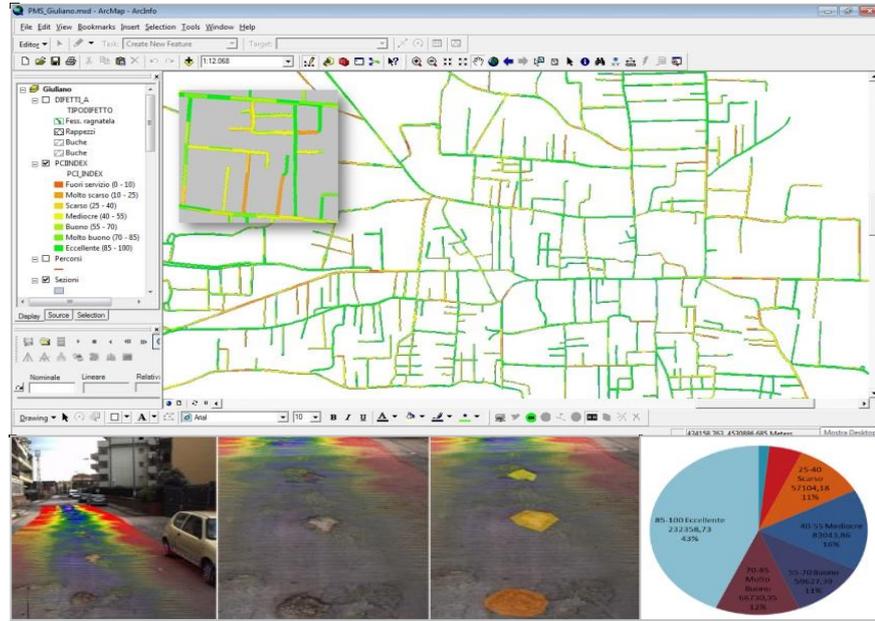
Mobile Mapping Data Management

Module for the consultation of georeferenced images and point clouds surveyed with Road-Scanner or other systems. It offers a wide range of specialized features that make the production and editing of CAD drawings and GIS maps very efficient and controlled. The module is also available as a plug-in for AutoCAD, ArcGIS and MicroStation, thus greatly simplifying the production of cartographic drawings in their original environment.

Integration with the Asset Management and Pavement Management modules

Road-SIT is a complete suite of software modules for the Road Information System. All new mobile mapping features are fully integrated in these modules, to improve the GIS and road-side assets extraction and management.

Road-SIT Survey is fully compatible with the most widespread mobile mapping systems like the Optech-Lynx, Riegl-VX450, Topcon IPS3 and Leica Pegasus. And of course with the well known Siteco's Road-Scanner.



The most flexible, high accuracy Mobile Mapping System available today

Configure your own selection of sensors, INS system or use your existing Faro, Z+F and other scanners.

Complete calibration, project planning, execution and data delivery software package included.



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