

VIRTUALGEO

Survey and Point-Cloud Software

Virtualgeo was established in 1994 as a spin-off from an established survey company active in the field of topographic survey and infrastructure planning since 1985. Virtualgeo has three offices in Italy, headquarters in Sacile and branches in Venice and Terni.<P>

The company focuses on advanced technological services in the fields of cultural heritage, particularly architectural and archaeological, and the environment. The evolution of techniques for data acquirement and representation, together with our need for "made to measure" software to improve productivity, have pushed us into investing heavily in research and development. Our organisational structure is arranged around the supply of sales and post-sales services; a team of highly trained professionals carries out technical support and training.

Laser Scanning

Laser scanning has been established as a unique technique for large and precise surveys of complex objects in a wide range of applications, both terrestrial and airborne. Laser scanning is a consolidated practice for us; we use it for surveying buildings of great artistic-architectural value, archaeological sites, historical urban areas and protected environments. Laser scanners quickly acquire the full 3D geometry of a wide variety of complex surfaces, resulting in dense, accurate and complete data. These properties mean laser-scanner technology compares favourably with traditional survey, making it highly suited for the preservation and valorisation of cultural heritage, protection and observation of the environment, rationalisation of production processes and monitoring of the environmental impact of industry.

Software Products

Since purchasing our first laser scanner in 2004, the Virtualgeo Informatics Department mission has been to develop and sell software solutions building on the Autodesk CAD family (AutoCAD and its vertical products) for managing and modelling 3D point-clouds acquired by terrestrial and airborne laser scanners. Our own CloudCUBE software enables reverse modelling; a methodology which allows not only for obtaining traditional 2D representations but also 3D-digital models from which it is possible to extract any dimensional data and 2D representation. The methodology also enables production of virtual reality and/or rapid prototyping products. The choice of AutoCAD as development platform is the strategic result of its worldwide leading position; CloudCUBE is thus completely integrated into the most used CAD work platform. The modular and scalable architecture, innovations and specific functions of CloudCUBE make laser-scanner technology affordable and easy to use for a wide range of users.

International Arena

For many years Virtualgeo has been active in the international arena, not least in collaboration with Italian and foreign government institutions. We have carried out architectural and environmental laser scanning in Russia, Egypt and Mexico. Internationally, the number of firms offering laser-scanning services is on the increase and all the main manufacturers of survey equipment have brought laser scanners onto the market. This development is propelled by widespread user confidence in the potential of laser scanning, and strengthened by the results of applying the technology in new fields. The effectiveness of the data-processing phase is crucial, and therefore advances in software possibilities play a key role. In particular, there is a need for an increase in level of automation, and this is the direction taken by our R&D efforts. Virtualgeo is aiming at value-adding partnerships with research centres and universities. Furthermore, in synergy with qualified partners, we intend to extend CloudCUBE functionalities to provide solutions to satisfy the needs of field operators. Our coming targets concern enlargement of the market by establishing a network of resellers/support services through agreements with expert companies.