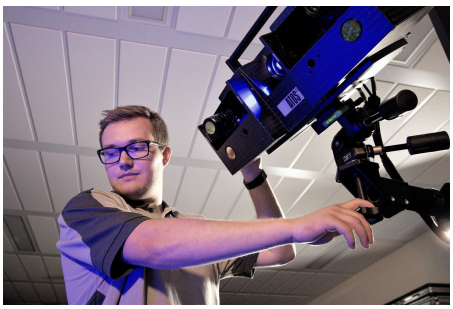
Fraunhofer IGP

Measuring of Large Structures

The main emphasis of the Measuring of Large Structures development team lies on the acquisition, analysis and visualization of 3D measuring data in the field of production technology. An interdisciplinary team and a broad spectrum of digitalization methods for stationary and mobile applications are the basis of innovative solutions even under difficult conditions (e.g. underwater).

Using the latest measurement technology for capturing the shape and location of large structures, the foundation for application- specific development of analysis and evaluation methods of geometric data is laid. Together with industry partners the research focus 3D data-capturing develops concepts of measurement and quality management capturing the as-build state of various objects. A qualification of the measurement process for quality control as well as the development of the entire process chain of data acquisition is performed, the results are presented accordingly and the information is returned to the production process.

The research field data analysis focuses on solving fundamental questions regarding the interpretation of multidimensional sensory data. The overall objective is customized software engineering for the automated analysis of high-resolution 3D point clouds and additional data sources. With application-specific development for automated extraction of object-relevant information of 2D, 3D or higher dimensional data, modelling techniques are developed, measurement and analysis processes are automated and the state of the object is derived.



Surveying with a structured light 3D scanner

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