

# On the Potential of Geodetic Techniques for the Navigation of Construction Processes

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## SUMMARY

Due to the potential of modern instrumental developments, advanced communication solutions and progress in data processing and management, completely new concepts for the participation of engineering geodesy in construction processes are possible.

Up to now the application of geodetic and photogrammetric techniques is mostly separated in time and responsibility from the construction process itself. Some concepts for the geometric control of construction machines exist, where mainly Total Stations or GPS are applied, but in general this is far away from a real integration of geodetic techniques into the process of construction.

In this paper at first the geometrical requirements for different phases of a construction process are outlined. Then the potential of modern and future geodetic measurement systems for real time determination of the geometry of structures are presented. Finally the importance of algorithms for real-time processing and problems of intelligent communication links and adequate data storage are discussed.