

An Overview of Mobile Mapping Systems

Naser EL-SHEIMY, Canada

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SUMMARY

An emerging solution to the problems faced in modern data collection campaigns is the integration of various navigation and remote sensing technologies together on a common moving platform. These Mobile Mapping Systems (MMS) are capable of providing fast, efficient, cost-effective, and complete data collection. Their development has been motivated by a desire to overcome the problems with alternative methods of spatial data collection. These alternative methods include point-wise GPS and traditional terrestrial surveying – which are ill suited for rapid or dense data collection. MMS share none of these disadvantages, while still being capable of providing similar object space accuracies.

This paper provides a brief history of MMS, including a summary of some of these systems developed up to now. It then details the development of the geo-referencing formulas used by MMS and shows how such formulas can be used to determine the accuracies of points measured by the system. The paper concludes with a closer examination of number of van-base, person-base and airborne-base mobile mapping.