

Automatic Field Mapping Systems: A Different Concept of Surveying

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SUMMARY

Nowadays many stages of a topographical surveying present different automation levels, and a recent idea is to collect the data in the field and at the same time to process it and to realize the surveying drawing, also in the field. It means that the office post-processing and representing stage are eliminated. This could be called Automatic Field Mapping Systems. This work discusses this subject, presenting a proposal methodology to be used for the implementation of a system like this, applied to planialtimetric surveying using total stations, in agreement with the defined characteristics in the NBR 13133 (a Brazilian norm for topographic survey).

A prototype program developed with this idea is shown. It's also presented a discussion of how this concept will affect the traditional surveying work a how should one get ready for this. Besides, the work presents how to accomplish the connection and operation of total stations using specific programs for this end, a fundamental item for the Automatic Field Mapping Systems. Some prototypes programs developed are presented to show how to apply in practice some of the proposed concepts.

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