

# **A Rapid and Cost-Effective Technique for Planimetric Mapping of Small Villages in Developing Countries**

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## **SUMMARY**

Land development issues in developing countries impose a great emphasis on obtaining up-to-date maps in a short period of time with minimal costs. The preparation of the required planimetric maps for small villages in affordable costs, time and scale would require proposing of smart and cost effective solutions.

This paper outlines some cost-effective techniques for preparing detailed maps of small villages in Egypt. The most appropriate cost-effective technique was selected and applied for the production of a planimetric map for a small village located in Ismalia Governorate, Egypt. The proposed technique utilizes GPS kinematic positioning where one GPS receiver was set stationary over a control station while the other rover receiver was set on the back of small van. The GPS antenna was elevated using a pole to prevent blockage of GPS satellite signals by village houses while the van was moving in the narrow streets. The GPS measurements resulted into a reasonable streets centerline data that enriched with traditional tape measurements for the street widths and mapping of building houses.

The study emphasizes on the comparison between the proposed approach and the recent affordable techniques that can be used in producing of such maps. Finally, some future ideas regarding the proposed approach gained from actual practice are suggested.