

Digital Map Revision – A Namibian Experience

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ABSTRACT

Namibia has complete topographic coverage at the scale of 1:50000. These maps, however, as at 1996, were more than twenty years out of date. At independence, the skilled staff available for the mapping activities in Namibia left for South Africa. The digital map revision was therefore done in an environment with severe limited capacity.

The methodology used was PC based using a GIS package with use limited to the region. The scale of photography used was 1:80 000 as opposed to the conventional scale of 1:60 000 or 1:50 000 used worldwide.

The strategy for the implementation of this project was split into two, Administrative strategy and Execution strategy. The administrative Strategy includes, selection of consultant and contractor, identification of entities, sources and qualities, acquisition of hardware and software, the training of staff and organization of workshops with users. The execution strategy includes acquisition of aerial photographs and orthophotos, capture of old data from existing plates, application of changes by comparing old data and new digital orthophoto and quality control.

The use of a PC-based system is advised for an environment with limited capacity and resources. Standardising on a software package with limited international usage was found costly. It is possible to use raw personnel to achieve satisfactory result. However this demands considerable technical assistance to accomplish. Having qualified personnel is still the best.

The use of a twin camera as compromise between an aerial photography coverage at small or large scale is recommended. Quality control must be strictly applied and enforced at every phase of the production. It is also very important to document the quality within the data. Using external evaluation is necessary when parts of the work are outsourced, but normally, quality control should be done internally.

This paper further discusses the methodology used, the problems encountered and the lessons learnt with respect to selection of hardware and software, scale of photography, quality of personnel, selection of contractor/consultants and quality control. Recommendations were also made for application in similar environment.

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