

ORTHOPHOTOMAP AS AN ALTERNATIVE TO THE LINE MAP

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A traditional map tries to represent, as reliable as it can, the earth surface. We have several steps in the map production: data collection, aerotriangulation, ground control point survey, planimetric and altimetric restitution, and others.

The author describe a methodology to generate orthophotomap in a digital environment. The great improvement in the computational area, in special in the hardware aspects, allows to transfer many tasks related to a line-map generation to the computer.

The orthophotomaps present several advantages over aerial photos and line maps: they have the pictorial qualities of aerial photos and the geometric quality of line maps, which allow direct measurements from the orthophotomaps.

In this paper, we present algorithms and methods related to photo mosaic, ground point survey, altimetric restitution and orthophotomap generation (differential rectification). The main problem in this approach is to automate the planimetric restitution. To this case, we discuss an alternative method based in image segmentation, pattern recognition and line and edge detection.