

MAPPING FROM LANDSAT AND SPOT SATELLITE IMAGERY

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Recent advances in the resolution and stereo capability of earth imaging satellites have made it practical to produce true cartographic maps from satellite imagery. Preliminary tests with Landsat TM have shown that:

- Satellite imagery can be corrected to planimetric accuracy suitable for 1:50,000 scale maps with very few control points.
- Elevation can be derived accurately from stereo satellite imagery by automatic computer processing.
- Natural planimetric features can be interpreted accurately enough for 1:50,000 scale mapping at 30 meter resolution.

This paper will update these results for SPOT imagery, particularly in the areas of elevation accuracy and the interpretation of cultural features where Landsat TM does not meet 1:50,000 scale mapping standards. An operational method of producing and updating topographic base maps digitally from satellite imagery will be presented.

The costs and benefits of satellite mapping, particularly for developing nations, will be discussed in detail.