

USE OF DIGITAL ELEVATION MODEL DATA FROM DIFFERENT SOURCES FOR ORTHORECTIFICATION OF IKONOS SATELLITE IMAGE

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ABSTRACT:

The commercial first very high resolution satellite, IKONOS, has an enormous viewing capability. As well as being an agile satellite and collecting images with off-nadir viewing up-to-60° therefore, it is also capable of collecting stereo images. IKONOS mono image products can be delivered to customers as terrain corrected or not depending on the request. Digital elevation model (DEM) data necessary for terrain correction is being generated from IKONOS stereo images to achieve the promised accuracy levels described in the IKONOS image products catalog. Recently, the use of different digital elevation model data for orthorectification of IKONOS images has come into consideration. This study aims to analyze the orthorectification results using three different DEMs derived from (1) digitized contours on 1/25000-scale topographic maps, (2) French SPOT-5 satellite stereo images and Russian TK-350 camera stereo images.