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Automatic Extraction of Arbitrarily Shaped Buildings from VHR Satellite Imagery

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Abstract : Satellite imagery is one of the emerging technologies which are extensively utilized in various applications such as detection/extraction of man-made structures, monitoring of sensitive areas, creating graphic maps etc. The main approach here is the automated detection of buildings from very high resolution (VHR) optical satellite images. Initially, the shadow, the building and the non-building regions (roads, vegetation etc.) are investigated wherein building extraction is mainly focused. Once all the landscape is collected a trimming process is done so as to eliminate the landscapes that may occur due to non-building objects. Finally the label method is used to extract the building regions. The label method may be altered for efficient building extraction. The images used for the analysis are the ones which are extracted from the sensors having resolution less than 1 meter (VHR). This method provides an efficient way to produce good results. The additional overhead of mid processing is eliminated without compromising the quality of the output to ease the processing steps required and time consumed.

Keywords : building detection, shadow detection, landscape generation, label, partitioning, very high resolution (VHR) satellite imagery
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