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Integration of Aerial Laser Scanning Data and CIR Images to Produce DTM in Urban Areas: Preliminary Results

Airborne Laser Scanning is an established technique to produce Digital Terrain Models (DTM). In spite of its widespread use, the extraction of a DTM in urban areas still poses problems because the filtering process often fails to separate some of the objects on the terrain surface from the terrain itself. This happens because only one kind of information – geometric information – is used in the process. To overcome this problem a methodology is proposed that integrates aerial laser scanning data with high-resolution orto-rectified CIR images to extract reliable information of the terrain and of the objects on it (like buildings and trees). The methodology was tested in an urban area located in north Portugal. The obtained results show that in complex urban areas the proposed methodology has a superior performance than the conventional one.

Poster Session A