GABLE ROOF DETECTION IN TERRESTRIAL IMAGES

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ABSTRACT:

This paper presents an automatic method for gable roof detection in terrestrial images. The purpose of this study is to refine the roofs of a 3D city model automatically derived from aerial images. The input images consist of geo-referenced terrestrial images acquired by a mobile mapping system (MMS). The raw images have been rectified and merged into seamless façade texture images (one texture per façade). Firstly, each image is pre-processed in order to remove small structures and to smooth homogeneous areas. Secondly, line segments are extracted and analysed to define the lateral edges of the roof. Finally, the analysis of the lowest part of the roof leads to the classification of the roof as gable or non-gable. The method was tested on more than 150 images and shows promising results.

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