

Development of Image based Mapping of Concrete bridge using Deepmatching

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ABSTRACT

Recent development of image processing and camera technology has enabled the production of panoramic images by extracting and matching high-level image feature points. However, matching and stitching the images of concrete decks is still a challenging problem because of its lack of feature points. This study proposes the image stitching and mapping technique of concrete bridge using Delaunay Triangulation and the combination of Deepmatching and SURF. Delaunay Triangulation is used to make the image correlation matrices. Deepmatching and SURF finds the matching points from the images respectively. And then through filtering, these points are combined to enhance the stitching accuracy. The proposed method is validated through the comparison with the image stitching method based on SIFT and SURF.

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