

Automatic Obstacle Removal for On-Vehicle Video using Spatiotemporal Analysis

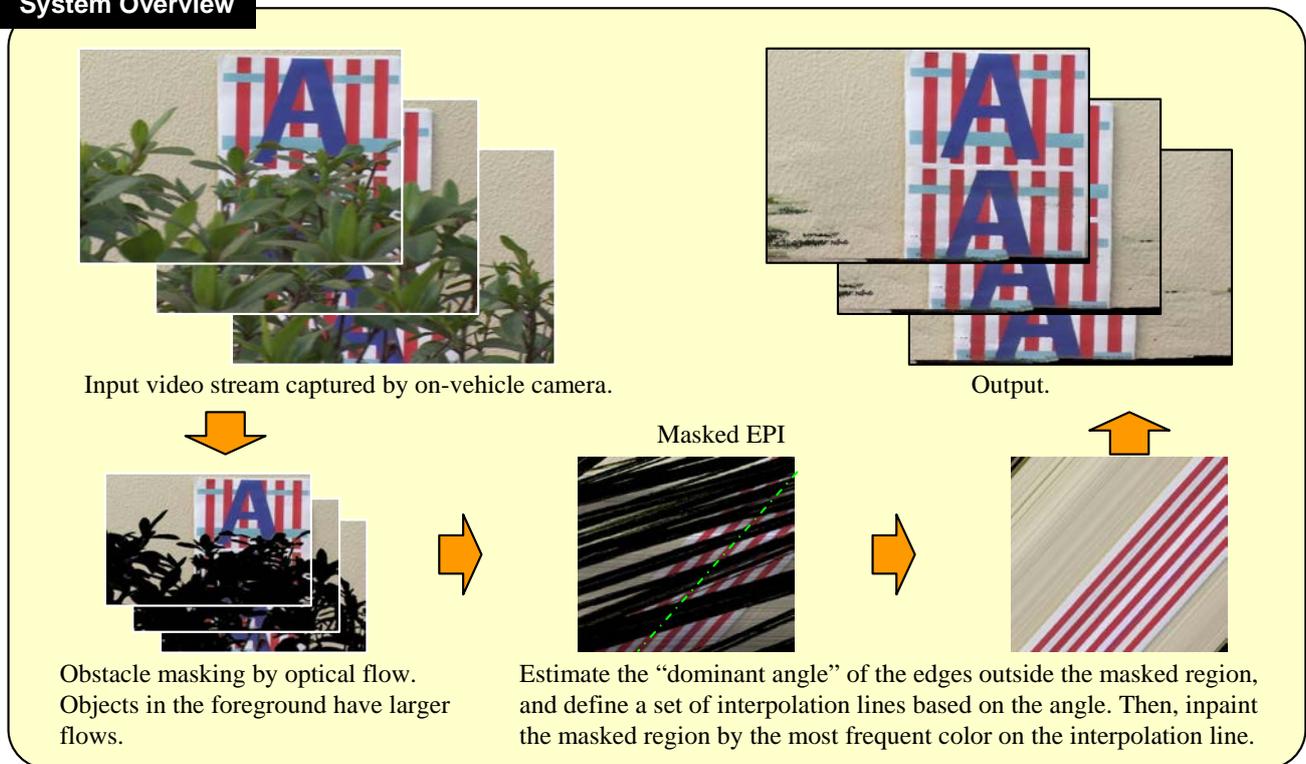
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In this research, the method which can automatically remove objects, such as pedestrians, telegraph poles, roadside trees, etc., from the on-vehicle video camera is proposed; such images are widely used for urban scene modeling (e.g. Google Street View), and a removal of these objects now becomes a critical issue. Since an input data is a video stream and an urban scene is mainly composed of planar surfaces parallel to the street, the method can effectively remove the objects by using the spatiotemporal image analysis. To show the strength of the method, several experiments using real data are conducted, which resulted in a successful removal of complicated objects.

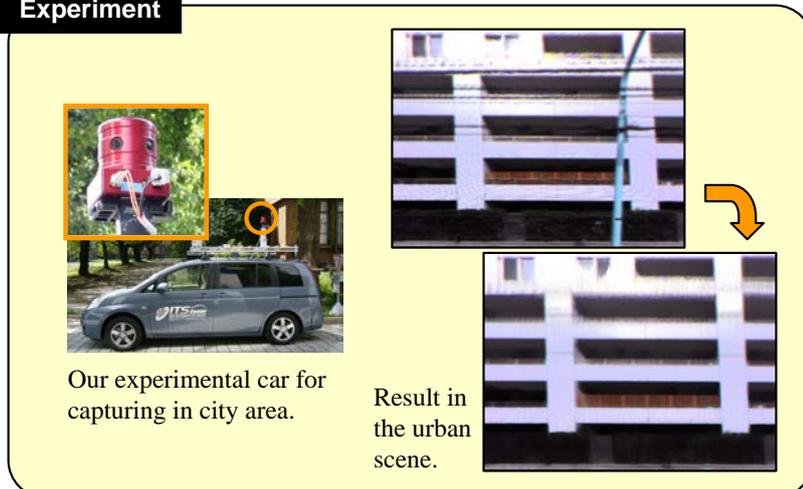
Publication

- [1] K. Kuribayashi, H. Kawasaki, S. Ono, K. Ikeuchi, "Automatic obstacle removal method for on-vehicle video using spatiotemporal analysis" (in Japanese), Meeting on Image Recognition and Understanding (MIRU), 2009. (to appear)

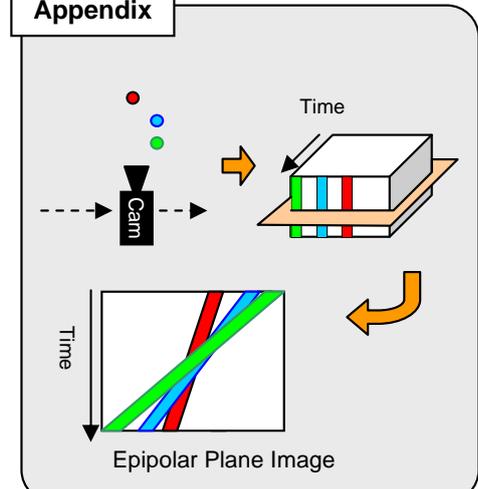
System Overview



Experiment



Appendix



Automatic Separation of foreground objects and texture planes from On-Vehicle video using plane structure

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In the urban scene modeling, separation of foreground objects (e.g. pedestrians, telegraph poles, roadside trees, etc.) and texture planes of buildings is important problem for 3D reconstruction and privacy, etc. We propose the method which can automatically separate foreground objects and texture planes for such problem from the on-vehicle video data. Since an input data is a video stream and an urban scene is mainly composed of planar surfaces the method can effectively separate the objects by using the spatio-temporal image analysis. To show the strength of the method, several experiments using real data are conducted, which resulted in a successful separation of complicated objects.

Publication

- [1] K. Kuribayashi, S. Ono, H. Kawasaki, K. Ikeuchi, "Automatic Separation of foreground object and the texture plane from On-Vehicle video using by plane structure" (in Japanese), Meeting on Image Recognition and Understanding (MIRU), 2010. (to appear)

