



MOVING TARGET DETECTION BASED ON GLOBAL MOTION ESTIMATION IN DYNAMIC ENVIRONMENT

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Abstract- AUV localization is not accurate based on sequence images if moving target is as landmark, so the moving target detection algorithm is studied based on global motion estimation, which detects and eliminates moving target according to the motion inconsistency of the moving target. Generally grid block matching is used in the global motion estimation, it can't effectively dispose the dynamic background, and the gradient direction invariant moments descriptors method of free circular neighborhood based on feature points is proposed, which is effective for the background rotating and light changing in two adjacent images. For the matching points, the parameters of global motion are estimated robustly combined with normalized linear estimation method and least median squares. Experiments show that the designed algorithm can effectively estimate parameters of global motion, and eliminate the motion target as mismatch.

Index terms: Moving target, global motion parameters, gradient direction, SURF operator, robust estimation.