Measuring the distance to a moving object using video monitoring complex system

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Moving objects recognition and measuring the distances to them are necessary options of video monitoring systems used to ensure safety on the roads, in parking areas and close to major transport infrastructure objects. In the work of the known methods for the recognition of static and moving objects using stereo vision are considered. We present related problems and possible solutions, on the base which the algorithms and methods are modified in a certain way. It is suggested ro use the method of determination distance to a recognizable object images obtained by a stereo pair takin in to account the known dimensions of the real object. Dependences of errors of determination distance to the target of various parameters, such as the distance between the cameras, errors in determining the angle of coaxiality of cameras are presented. The limits of applicability of the method, depending on the size of the desired object and the distance to it are shown. Model experiment for a moving object including the preservation of the required proportions of object size and distance, and speed of movement relative to the path traveled in a small room is performed.

Keywords: *video monitoring, stereovision, moving object, distance determination.*

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