EVALUATION OF IMAGE QUALITY IN AUTOMATIC IMAGE PROCESSING

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The semantic gap in the analysis of the human behavior digitally videotaped is huge. Most surveillance software operates on a very limited amount of parameters. In order to bridge the gap, it is necessary to build the artificial cognitive solution that operates at much higher level and analyzes footage, describes the events taking place and reasons about what is going on.

The presented article has analyzed the factors that contribute to the formation of the image as well as the methods of these problems solution. This will help us research mechanisms of the additional parameters that are of importance in the problem under consideration. Authors of the article attempt at constructing the computer vision that analyzes a vast array of external factors. This problem is especially topical in case of the same situation evaluation from different visual angles.

The conducted research has allowed the mechanisms development based on the measures for evaluating the quality of images. The probabilistic method based on the image quality evaluation is considered in this paper. In the paper basic information is selected, on which parameters are established the measures for evaluating the quality of images.

Video senders produce a glut of the material daily. Refining that ore into the gold of useful information requires new approaches. The proposed method in the article presents the possibility to much effectively analyze the streams of video data.

The use of different metrics for the task automation for evaluating the quality of the video stream is investigated in the work. The factors affecting the image quality are explored. The topicality of the research is proved by the publications of the American and the European research programs, in particular by the results within FP7.

The dependability of the metric choice (on the scale from speed up to quality) is shown in article.

Within the given article the task is set to create the sophisticated computer vision technology necessary to develop the automated assessment of what the robot sees. This problem includes the assessment of factors influencing the image quality. The influence of industrial factors and factors of lighting are described in the paper. The approaches and the methods to solve specific problems and their relationships are presented.

The use of the automated image evaluation realizes a flexible approach to the understanding of factors value (impact factors) that are of bearing on the recognition algorithm. This will make the computer vision more adaptive to the external influence.

Of particular importance this estimate is in the recognition systems, because according to the recognition system an object can be described in different modes – the robot receives different images of the object from different visual angles.

Keywords – modern methods of image quality evaluation.