IMAGE QUALITY EVALUATION

V. Hrytsyk(1941)[1], V. Hrytsyk (1973)[2]

[1] Information Systems and Networks Department, Lviv Polytechnic National University, S. Bandery Str., 12, Lviv, 79013, UKRAINE; [2]Ternopil National Technical University by I. Puluja

'Most surveillance software operates only at a very low level…in order to bridge the gap it is necessary to build an artificial cognitive solution that operates at a much higher level, which is able to analyse footage, describe the events taking place and reason about what is going on'.

The research has enabled to develop mechanisms based on measures for evaluating the quality of images. The probability-based method of evaluating image quality is shown in this paper.

The video produces a glut of material daily. Refining that ore into the gold of useful information requires new approaches. We have now made automated video analysis much smarter.

Influence of using of probability-based metric for task automation for evaluating the quality of the video stream is investigated in the work. The factors affecting on image quality are investigated. The research of American scientists is investigated in the research. Topicality of the research is shown in relevance of direction, based on publications in the reports of the European research program FP7.

The choice of metric (on a scale from speed up to quality) is dependent on the task and is shown in article.

The creation of a sophisticated computer vision technology necessitates the development of automated assessment of what the robot sees. This problem includes an assessment of factors influencing image quality. Influence of industrial factors and factors of lighting is described in paper. The probability-based methods for solving specific problems and their relationship are shown.

The use of automated image evaluation which analyzes the system of recognition and identification, enables us to realize a flexible approach to the selection of factors (impact factors) in selection and error tolerances in the recognition algorithm. This will make the computer vision more adaptive to external influence.

Of particular importance, this estimate is for recognition problem, because according to a recognized system object's path – the robot receives different images for classifier or system verification.

Keywords – quality evaluation for video, automatic information, analytic systems.