Correction of Image Characteristics or Methods of Improving a Visual Quality of Image

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Abstract - **in the article discussing methods of image enhancement and scope.**

Keywords - **image enhancement, dynamic range, local contrast, underscores the boundaries, x-rays, aerospace shots, night vision devices, underwater photography.**

I. Introduction

Widespread using of closed-circuit television systems considerably simplifies the work of people in different fields, but depending on the terms of the using, the image requires an improvement, .

II. Instruction for Authors

Closed-circuit television systems are designed for forming video information, visual observation, analysis and control of various objects, solution of the information-measuring and control tasks in different areas. Closed-circuit television provides an opportunity to control with a noncontact method, without detaining and stopping a productive process, sizes and configurations of fabricated products, and to detect defects in them. It is used in space researches, submarine works, medicine, transport, etc..

Considerable part of tasks of information collation and data analysis are related with images. Considering the methods of improving the image always sharply stands the question of choosing the criteria of estimation the quality of their transformation. Digital systems of closed-circuit television simplify and accelerate the work, give a chance to reduce the time of information collation that can be vitally important in a medical sphere, because digital x-rayed vehicles diminishing time of harmful radiation and do not require developing of a picture as analog devices. With the help of program realization of mathematical methods operator can instantly improve the image or any area of image, which interested him.

Due to features of receiving the image in radiography it is expedient to use such methods of improving visual quality of image as: amplifying of local contrasts, filtration, increasing of dynamic range. Using these methods is the most necessary in such type of systems, because on original images are losing a contrast, reducing a dynamic range and increasing level of noise because of photoemission.

For space researching is using the aerospace survey. Receiving materials can be not clear, made at different time. And an aerospace survey is using in geographical aims, reconnaissance, where the special attention is spared to the certain objects and their borders.

For aerospace shots better use this method as a contrast, underscores the boundaries, histogram equalization.

Nowadays, video observation has wide application and works in different conditions. In these systems is appropriate to use histogram equalization, underlining of borders, expansion of dynamic range, filtration and amplification of local contrasts. This is an optimal set of methods with help of witch it is possible to get the image of acceptable quality with the least delay in real-time.

Intensification of brightness is a major question for the night vision devices, which since the time of appearing first widgets got wide distribution and application at soldiers, hunters and even manufacturing, where due to this technology rising level of security on the roads in night-time.

During the underwater photography is necessary to consider the properties of water, substances stored therein and depth. These factors lead to poor resolution and reducing image contrast. Also, when shooting underwater at a great depth the color of objects changes and appropriate use of filters. Therefore, the software realization is a better method to use the underscore boundaries and the method of local contrast, and to conduct correction relative refractive index.

The main advantage of methods of processing images is possibility of rapid treatment in a real time scale a television video signal. And the main defects of this method are lack of functionality and insufficient efficiency.

III. Conclusions

Considered basic methods of improvement and determination the sphere of application certain methods.

Researched software for image processing and created programs to improve the quality of images in their respective industries.

References

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