

Paper-JT- 010: Object Quality Enhancement of Multi-Frame Low-Resolution Video

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ABSTRACT

A good quality image is required in various applications such as object identification and authentication. This research presents performance of image resolution enhancement method, in which the low-resolution image originated from low-resolution CCTV video. The enhancement method is initialized by averaging video frames and continued by interpolating the resulted images using the existing interpolation techniques namely bilinear, bi-cubic, nearest neighbor and spline. Frame rate of 15 and 25 frames per second (fps) has been applied to the testing video. The result shows that the differences of frame rate and number of the averaged frame would affect image quality. Subjective assessment of respondent of MOS above 3 has been obtained by increasing the frame rate and the number of averaging frame.

Keywords: digital video, frame rate, interpolation, super-resolution, MOS.