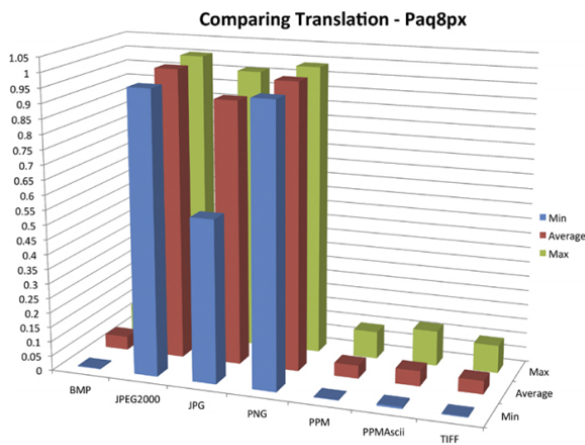


Using Normalized Compression Distance for image similarity measurement: an experimental study

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Similarity metrics are widely used in computer graphics. In this paper, we will concentrate on a new, algorithmic complexity-based metric called Normalized Compression Distance. It is a universal distance used to compare strings. This measure has also been used in computer graphics for image registration or viewpoint selection. However, there is no previous study on how the measure should be used: which compressor and image format are the most suitable. This paper presents a practical study of the Normalized Compression Distance (NCD) applied to color images.

The questions we try to answer are: Is NCD a suitable metric for

image comparison? How robust is it to rotation, translation, and scaling? Which are the most adequate image formats and compression algorithms? The results of our study show that NCD can be used to address some of the selected image comparison problems, but care must be taken on the compressor and image format selected.