Animation of Facial Expressions: From Images to Images through Images

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Abstract

An empirical technique for the analysis and comparison of image motion patterns in facial expressions has been developed and implemented. It revealed that patterns exist, both with respect to the same person on different occasions, and also between different people performing the same expression. The empirical results have been used for creating realistic facial animations. The novel aspect of this work is that the animations of facial expressions are produced without ever generating three-dimensional models of the face. Rather, given very few images and a few image parameters that can be automatically extracted for the in-between images, the full sequence is reconstructed.