Abstract

This paper describes a triangle based algorithm to transform a source image into a target image. In this paper, a digital source face image is mapped to a target face image to transform the shape of source into the target. This work is done with six steps. The initial step of the stated algorithm takes source and destination face images as input from the specified location or through the webcam. The second step deals with finding the 68 landmark points of input images for tracking the features such as eyes, mouth, nose, lips, ears and face. The third step generates proposed 116 nos of nonoverlapping triangles from 68 landmark points (which has been found in the second step) for both the input face images. In forth step one mapping link is established between the each pair of corresponding proposed 116 triangles of both the images. Then these pairs of triangles are divided on the basis of given threshold value of the in-radius of the triangles pairs. In this step a set of smallest subtriangles are found in the last label for the triangle pairs. In fifth step each pair of smallest sub-triangles are mapped with pixels from source face image to destination face image and then generate intermediate image with color interpolation. The sixth step is the process of assembling the 116 nos of triangles to generate the resultant face image in the shape of target face image. The results show that the proposed approach is simple and takes less time to transform the source image.
Triangle Wise Mapping Technique to Transform one Face Image into Another Face Image

References


Albert Ali Salah and Lale Akarun. 3d facial landmarking under expression, pose, and occlusion variations, 2008.


Index Terms
Computer Science Image Processing

Keywords
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