

ABSTRACT

ADAPTIVE CONTRAST ENHANCEMENT

Disclosed is a method for generating transfer curves for adaptive contrast enhancement. Given an input image, a luminance histogram is generated based on a set of predefined input luminance ranges. The luminance histogram is then expressed as a weighted sum of a set of predefined "primitive" histograms. Each primitive histogram has an associated reference transfer curve. A final transfer curve is produced as a corresponding weighted sum of the associated reference transfer curves. The image luminance can then be adjusted according the to the final transfer curve, resulting in enhanced image contrast. The disclosed method enables expansion of the number of available reference transfer curves without increasing the number of luminance ranges.

Fig. 6