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Patent Search

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Abstract:

AN IMAGE PROCESSING SYSTEM USING FIXED POINT AND FUZZY LOGIC UNIT [035] The present invention discloses an image processing system using fixed point and fuzzy logic unit. The system includes, but not limited to, one or more processors and microcontrollers connected in a computer network with a centralized located processing unit is configured to evaluate fixed point calculation to image compression, image processing and flood filling of a region. Further, the image compression is to reduce redundant information in the digital image using the fixed point calculation with the fuzzy logic unit, and 2D Gaussian Filtrations.

Complete Specification

- Claims:1. An image processing system using fixed point and fuzzy logic unit, comprising: one or more processors and microcontrollers connected in a computer network with a centralized located processing unit is configured to evaluate fixed point calculation image compression, image processing and flood filling of a region; wherein the image compression is to reduce redundant image information in the digital image using the fixed point calculation with the fuzzy logic unit, and 2D Gaussian Filtrations.
2. The system as claimed in claim 1, wherein the fuzzy logic unit is used to determine the image points of a region to be filled and considering the image as a rectilinear grid of squares/rectangles corresponding to image points.
 3. The system as claimed in claim 1, wherein each of the fixed point calculation includes creation of digital topology and classifying the digital image into varied structure through the fuzzy logic unit.
 4. The system as claimed in claim 1, wherein the filling of region of the image is further determined by the fixed point calculation after evaluating noise in the region.
 5. The system as claimed in claim 1, wherein further, for image points whose square or rectangle is intersected by a borderline between corners of the region in the image, a predefined intersection value defined using the fuzzy logic.
 6. The system as claimed in claim 5, wherein the predefined intersection value is proportional to a ratio of areas of its square or rectangle as divided by the borderline.
 7. The system as claimed in claim 1, wherein the image pixel data calculation comprises a degree to which a portion of the fixed point would be within a circular, rectangular or triangular portion defined by the corners and having specific number of sides on the border of the region.

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