

one portion of film that has been scanned to generate a pixel representation, the program of instructions comprising:

- (a) instructions for segmenting at least one portion of the pixel representation to identify at least one region of missing data;
- (b) instructions for calculating an area/perimeter ratio for each identified region of missing data; and
- (c) instructions for subjecting each identified region of missing data having an area/perimeter ratio less than a predetermined maximum to a closest-to-radial-based-function filtering operation to estimate pixel values in that region from neighboring pixel values.

16. The machine-readable medium of claim 15, wherein each pixel represents a color within a three dimensional color space, and wherein the segmenting comprises mapping the three dimensional color space of the pixels in each portion to a one dimensional line segment.

17. The machine-readable medium of claim 16, wherein the segmenting instructions further comprise:

- instructions for establishing a reference color for each portion; and
 - instructions for determining a corresponding anchor color based on the established reference color;
- wherein the one dimensional line segment is defined by the reference color at one end and the anchor color at the other end.

18. The machine-readable medium of claim 17, wherein the segmenting instructions further comprises:

instructions for quantizing the one dimensional line segment into a plurality of bins, each of which is identified with a bin-index;

instructions for creating a co-occurrence matrix $M[i][j]$ for each portion, $M[i][j]$ being equal to the number of pixel locations in that portion, such that a current pixel has bin-index i and its right or bottom neighbor has bin-index j ;

instructions for selecting a threshold that creates two areas in the co-occurrence matrix and that maximizes the entropy of the data in each of the two areas; and

instructions for identifying pixels having a bin-index greater than the threshold as missing data.

19. The machine-readable medium of claim 15, wherein the calculating instructions comprises instructions for performing a component filtering operation.

20. The machine-readable medium of claim 15, wherein, for each pixel value estimated, the closest-to-radial-based-function filtering operation comprises using color values of neighboring pixels, without introducing any new colors, to estimate that pixel value and to fill each region of missing data.

21. The machine-readable medium of claim 20, wherein the closest-to-radial-based-function filtering operation considers spatial distribution and color distribution information in estimating pixel values to fill each region of missing data.

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