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METHOD AND APPARATUS FOR IDENTIFYING VIDEO
FIELDS PRODUCED BY FILM SOURCES

Abstract

A first pixel (YA) of a given field is compared with second (YB) and third (YC) vertically aligned pixels of corresponding horizontal position of an adjacent field to produce, for each first pixel, a pixel difference signal (PD) having a value of zero if the value of the first pixel is intermediate the values of the second and third pixels, the difference signal otherwise having a value equal to the absolute value of a difference between the value of the first pixel and the value of one of the second and third pixels having a value closest to that of first pixel. The pixel difference signals are accumulated over a predetermined portion of one field period of the video signal to provide a field difference signal (Sn) which is analyzed by a group of five correlators for patterns characteristic of 2-2 pull-down or 3-2 pull-down film mode sources. Flags are produced for identifying film mode operation (FILM MODE) and for identifying which of the adjacent fields to use in subsequent video processing (FILM FIELD IDENTIFIER) such as de-interlacing or flicker reduction.

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Figure 1