

METHOD AND APPARATUS FOR INTERLACE-PROGRESSIVE VIDEO CONVERSION

ABSTRACT

A method and apparatus for detecting and correcting motion artifacts in interlaced video signal converted for progressive video display. A correction is applied where interlaced video material is determined to originate from film source, thereby having been converted to video using a process known as 3-2 pulldown. Where the video material is not a result of the 3-2 pulldown process, a check is made for the presence of "pixel motion" so that corrections may be applied to smooth out the pixel motion. To determine 3-2 pulldown or field motion, a video field is compared to the field prior to the previous field to generate field error. Field errors are generated for five consecutive fields and a local minimum error repeated every five fields indicate the origination of the video material from film source using the 3-2 pulldown process. Upon confirmation of 3-2 pulldown, the video material is modified to correct for the mixing of two film frames into one interlaced video frame by assuring that the two fields of the de-interlaced video frame contain data from the same film frame. Where the video material did not originate from a film source, but pixel motion is detected, the pixel motion is smoothed out by an averaging method. The odd and even fields of the resulting video data are subsequently combined to form a progressive video material.



162162

000001



000001