DYNAMICALLY DETERMINING GROUP OF PICTURE SIZE DURING ENCODING OF VIDEO SEQUENCE

ABSTRACT

Dynamic determination of group of picture (GOP) size as a function of picture change activity within a sequence of video frames is disclosed. Image statistics on intraframe characteristics of the sequence are compared to a preset threshold in step 331 for deciding whether to continue within an existing GOP or to begin a new GOP. A frame of the sequence is intra-coded (I), and a number of subsequent frames is bi-directionally predictive-coded (B). Each B frame subsequent to the I frame is encoded employing forward prediction motion estimation only from the I frame. When a predefined picture degradation occurs, a new GOP is initiated. One example of an intraframe characteristic to be monitored is the number of intra-coded macroblocks within each B coded frame. This number is compared against a threshold number, which may be a percentage of the total number of macroblocks within the frame.

Fig.6