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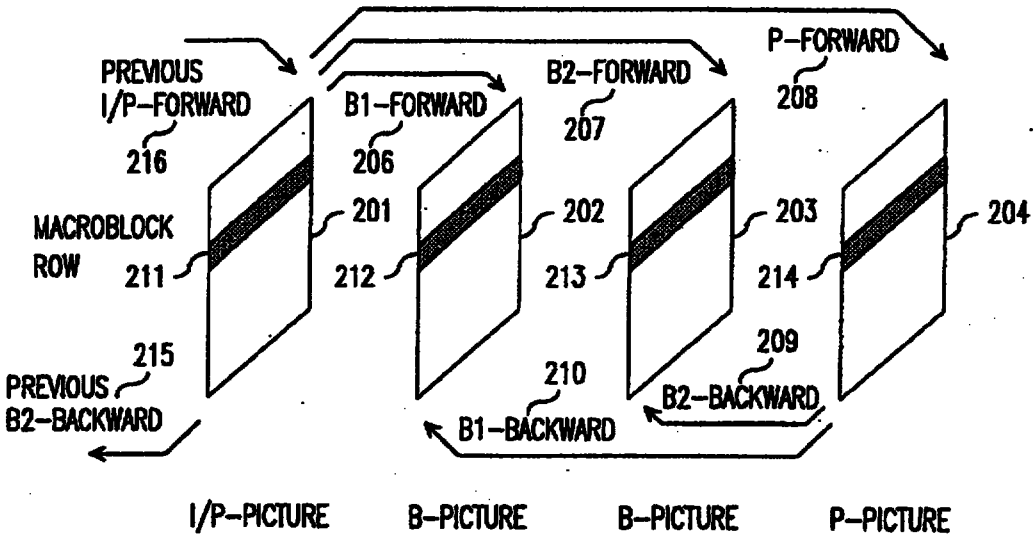
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(54) Title: MOTION VECTOR DETECTION WITH LOCAL MOTION ESTIMATOR



(57) Abstract

A method and apparatus of encoding digital video, for example according to the ISO/IEC MPEG standards (ISO/IEC 11172–2 MPEG–1 and ISO/IEC 13818–2 MPEG–2), which employs a local motion estimator for determining respective local motion vectors for groups of adjacent macroblocks in a picture. A local motion vector is determined for each row of macroblocks in a picture from the motion vectors of the macroblocks in that row. Then, for macroblocks in the corresponding row of a subsequently coded picture, the local motion vector can be used to select the search window used for determining the motion vectors. The local motion estimator improves search range and accuracy of macroblock motion vector detection without increasing the search window accessing bandwidth and caching requirement, and computation lode of searching.