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(54) Title: METHOD AND APPARATUS FOR REGENERATING A DENSE MOTION VECTOR FIELD

(57) Abstract

The present invention provides a method (300) and apparatus (100) for regenerating a dense motion vector field, which describes the motion between two temporally adjacent frames of a video sequence, utilizing a previous dense motion vector field. In this method, a spatial DVF and a temporal DVF are determined (302 and 304) and summed to provide a DVF prediction (306). This method and apparatus enables a dense motion vector field to be used in the encoding and decoding process of a video sequence. This is very important since a dense motion vector field provides a much higher quality prediction of the current frame as compared to the standard block matching motion estimation techniques. The problem to date with utilizing a dense motion vector field is that the information contained in a dense motion field is too large to transmit. The present invention eliminates the need to transmit any motion information.

