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- (71) Applicant and
(72) Inventor: DEMOS, Gary [US/US]; 10720 Hepburn Circle, Culver City, CA 90232 (US).
- (74) Agents: KENDRICK, Mark, R. et al.; Pillsbury Winthrop Shaw Pittman LLP, 725 South Figueroa Street, Suite 2800, Los Angeles, CA 90017-5406 (US).

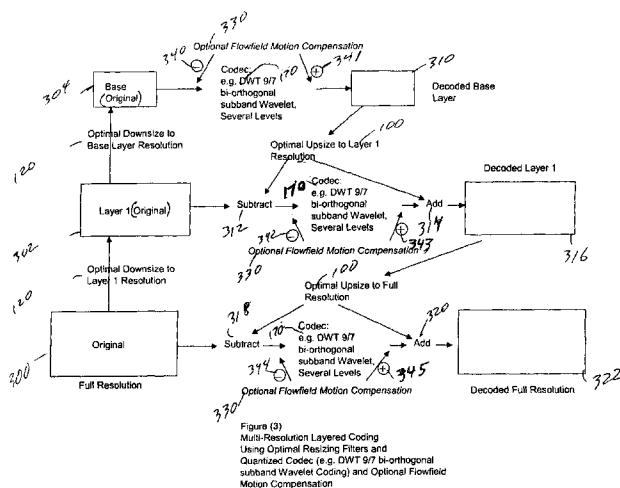
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(54) Title: FLOWFIELD MOTION COMPENSATION FOR VIDEO COMPRESSION



(57) Abstract: Motion compensation for video compression using a "flowfield" comprising a per-pixel field of motion vectors and confidence values. Flowfields can be quantized transform coded for compression motion compensation. Encoding-only flowfields match with one or more previous and subsequent frames to determine both modulation for resolution-enhancing layers, as well as sharp/soft filtering for an original image, a base layer, and for resolution-enhancing layers. Encoding-only flowfields can be used with various codec types by using the flowfield motion vector length and confidence to drive sharp/soft filters to improve efficiency via in-place noise reduction. Pixels may be displaced using encoding-only flowfields to nearby frames, and weighted for efficient noise reduction. Encoding-only flowfields are discarded after their use in encoding, and therefore do not require coded bits. Encoding-only flowfields can be applied to all frame types, including intra, predicted, forward flowfield-predicted "F" frames, and multiply-predicted "M" frame types, and improve intra coding efficiency.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, COMPENDEX, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	EP 1 377 036 A (MICROSOFT CORP [US]) 2 January 2004 (2004-01-02) paragraphs [0025] - [0032] paragraphs [0040] - [0060]; figures 1,3,4 -/--	1-23

Further documents are listed in the continuation of Box C.

See patent family annex.

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European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Kuhn, Peter

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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A	BAKER S ET AL: "Super-resolution optical flow" TECHNICAL REPORT CMU-RI-TR-99-36, XX, XX, 1 October 1999 (1999-10-01), pages 1-13, XP002223179 paragraphs [0001], [0002]; figures 1-3	1-23
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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