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California 92121-1714 (US). **KARCZEWICZ, Marta**;
 5775 Morehouse Drive, San Diego, California 92121-1714
 (US).

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(74) **Agent: LOOMIS, Timothy F.**; Shumaker & Sieffert, P.A.,
 1625 Radio Drive, Suite 100, Woodbury, Minnesota 55125
 (US).

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(71) **Applicant: QUALCOMM INCORPORATED** [US/US];
 ATTN: International IP Administration, 5775 Morehouse
 Drive, San Diego, California 92121-1714 (US).

(72) **Inventors: ZHANG, Zhi**; 5775 Morehouse Drive, San
 Diego, California 92121-1714 (US). **HUANG, Han**; 5775
 Morehouse Drive, San Diego, California 92121-1714 (US).
CHEN, Chun-Chi; 5775 Morehouse Drive, San Diego,
 California 92121-1714 (US). **ZHANG, Yan**; 5775 More-
 house Drive, San Diego, California 92121-1714 (US).
SEREGIN, Vadim; 5775 Morehouse Drive, San Diego,

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(54) Title: MULTI-PASS DECODER-SIDE MOTION VECTOR REFINEMENT

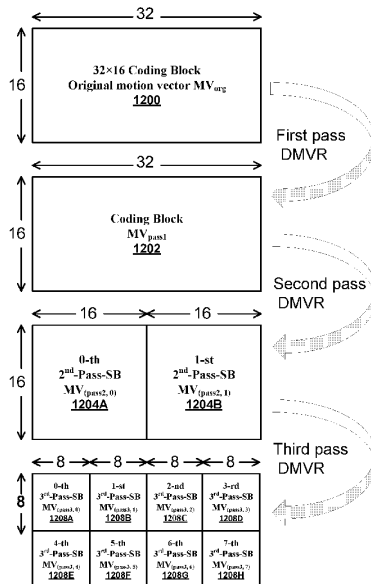


FIG. 12

(57) **Abstract:** Example devices and techniques for multi-pass decoder-side motion vector refinement (DMVR) are disclosed. An example device includes memory configured to store video data and one or more processors coupled to the memory. The one or more processors are configured to apply a multi-pass DMVR to a motion vector for a block of the video data to determine at least one refined motion vector and decode the block based on the at least one refined motion vector. The multi-pass DMVR includes a block-based first pass, a sub-block-based second pass, and a sub-block-based third pass.

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