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(71) Applicant *(for all designated States except US)*: SGS–THOMSON MICROELECTRONICS ASIA PACIFIC (PTE) LTD. [SG/SG]; 28 Ang Mo Kio Industrial Park 2, Singapore 569508 (SG).

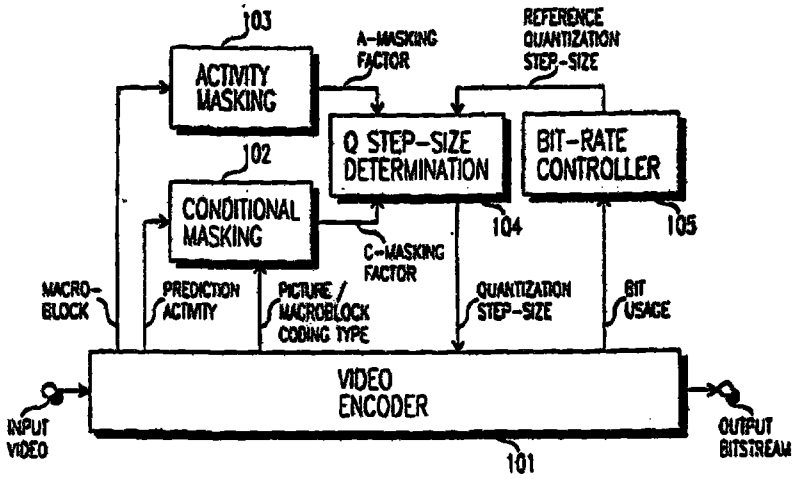
(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: HUI, Yau, Wai, Lucas [SG/SG]; 10H Braddell Hill #24–31, Singapore 579727 (SG).

(74) Agent: DONALDSON & BURKINSHAW; P.O. Box 3667, Singapore 905667 (SG).

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(54) Title: CONDITIONAL MASKING FOR VIDEO ENCODER



(57) Abstract

This method and apparatus described herein imposes masking factors to the determined quantization step sizes of macroblocks of a video sequence such that encoding efficiency is increased. A conditional masking method can be used to take advantage of the fact that P–pictures are more important than B–pictures in terms of motion and scene updates as coding noise in such updates are likely propagated by P–pictures. The masking can be applied conditionally to motion/scene update regions of a picture such that coding noise is reduced and therefore bits are saved from less propagation of this noise. Before encoding each macroblock of a picture from an input video sequence, a video encoder with conditional masking determines if the macroblock type belongs to a significant motion or scene update region. A conditional masking factor is then determined for the macroblock based on the determined macroblock type and the picture coding type. The conditional masking factor is combined with a macroblock reference quantization step–size which may be calculated using conventional methods based on bit allocation and bit utilization, and an optional activity masking factor based on activity level of the macroblock and/or its surrounding region to form the final quantization step–size for coding of the macroblock.