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Rate Control Algorithm for High Quality Compression of Static Test Pattern Using Target Bit Allocation In Digital TV system

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Abstract - In this paper, We propose a new algorithm for generating a high quality test bit stream to evaluate the static image quality of DTV image based on a target bit allocation in the processed of rate control . In order to allocate the number of target bits , we consider the normalized complexities which are updated or maintained according to GOPs picture qualities. The proposed rate control method is suitable for compression of static test pattern while MPEG-2 Test model 5 is suitable for moving picture . to evaluate the performance of proposed algorithm , the test bit stream are generated by an MPEG-2 software encoder using the proposed algorithm. Experimental results show that average PSNR of the method is higher than those of the conventional case . With experiments in DTV system, we have conformed that the proposed algorithm has a stable bit rate and good video quality and it is suitable for evaluation of the DTV receiver .