Review on Intra-prediction in High Efficiency Video Coding (HEVC) Standard

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Abstract

The objective of this paper is to provide a review of the intra prediction part in recently developed HEVC standard. HEVC (H.265) standard is the latest enhanced video coding standard which was planned to improve the rendered specifications of its preceding standard MPEG-4 (H.264). The main goal of the HEVC standardization effort is to enable significantly improved compression performance relative to existing standard H.264. For similar video quality, HEVC bit-streams consume only about half of the bitrate compare to previous standard H.264. Any video possess redundant bits in every frame. For remove this redundancy prediction process is used. Intra-picture prediction is a tool in HEVC which uses some prediction of data spatially from region to region within a specific picture, but has no dependence on other pictures in the video frames. HEVC gives higher compression comparing with previous standard H.264 because of its new features like quadtree structure, more directional intra-prediction modes. HEVC suitable for resolutions up to Ultra High Definition (UHD) video coding in the future.

References
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Index Terms

Computer Science

Image Processing

Keywords

AVC, H.264/MPEG-4, HEVC, Intra-prediction.