عنوان مقاله:

Early Termination Algorithm for CU Size Decision in HEVC Intra Coding

محل انتشار:

نهمین کنفرانس ماشین بینایی و پردازش تصویر ایران (سال: 1394)

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خلاصه مقاله:

Intra coding in the High Efficiency Video Coding (HEVC) standard can significantly improve the compression efficiency but increasing the number of intra prediction modes and also higher number of Coding Unit (CU) sizes in the HEVC standard imposes much higher computational load compared with intra prediction in H.264/AVC, which substantially is computational intensive. To reduce the intra coding complexity in HEVC, this paper presents an early termination algorithm for intra prediction. The proposed method is based on the fact that a homogenous region can be predicted with larger CUs. As a result when the proposed smoothness parameter is lower than apredefined threshold, only the prediction modes in the current CU are evaluated. Experimental results indicate that the proposed algorithm can provide on average 27.5% time savings with only 0.4% BD-rate loss whereas it maintains the same coding video quality compared with HEVC reference software, HM15.0, in all intra-main configuration

کلمات کلیدی:

Intra prediction; Fast intra mode decision; Fast CU size decision; HEVC