

# Content Based Low Complexity Algorithms for High Efficiency Video Coding

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## Motivation

HEVC total encoding time is around 3 times of H.264  
Target: Cut 50% off

## Proposals

### Content Based Skip Mode Pre-decision in ME (CFME)

### Content Based Hierarchical AIF (CAIF)

### Content Based Quadtree All Zero Block Detection (CQAZB)

## Approach

## Evaluations

Module	H.264 FRext JM	HEVC KTA	HEVC HM
Content	Standard Development	CFME	CAIF
Platforms	H.264 FRext JM	HEVC KTA	HEVC HM
Each Module Reduction	ME	AIF	T&Q
Total Encoding Reduction	34%	18%	16%
	13%	6%	8%
	+ 27% off	+ 27% off	+ 27% off

## Conclusion

By using content based low complexity algorithm, one third computation reduction in the HEVC encoder.

## Publications

6 Journal papers, 11 Conference papers

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