Abstract

The paper presents an architecture for fast mode decision algorithm in H. 264/AVC for 4x4 intra-prediction. This algorithm is based on the inherent symmetry existing in the spatial prediction modes. This algorithm gives a faster way of calculating sum of absolute differences (SADs) for all modes of intra prediction. So, a significant computational savings can be achieved. Synthesis results confirmed that the proposed architecture is able to process HD videos (1280x720) at 30 fps as well as 60 fps and Full HD videos (1920x1088) at 30 fps in ASIC platform and maximum frequency achieved is 63 MHz.

References

Architecture for H. 264 Intra Prediction Fast Mode Decision algorithm


Index Terms

Computer Science
Algorithms
Keywords
AVC  H. 264  Intra Prediction  Inherent Symmetry  mode decision  SAD  HD
videos
ASIC platform