Low Hardware Cost Architecture of H.264/AVC Integer Motion Estimation

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Research Theme

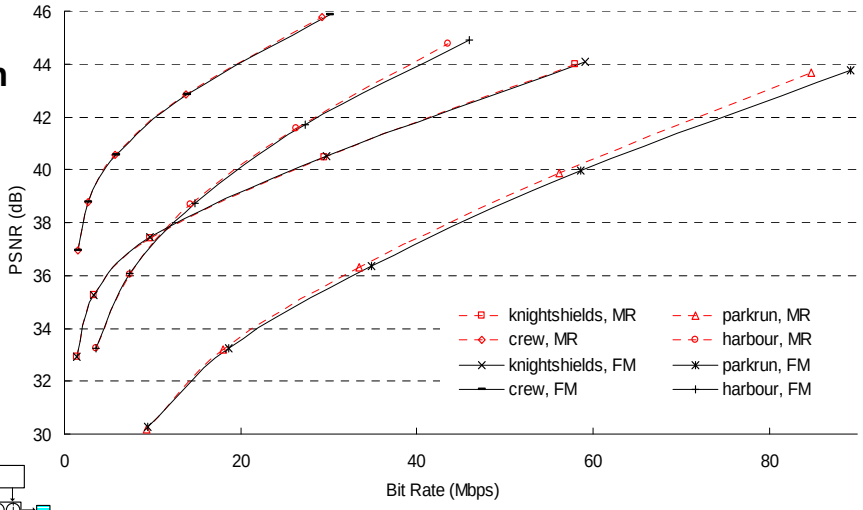
Variable Block Size Motion Estimation

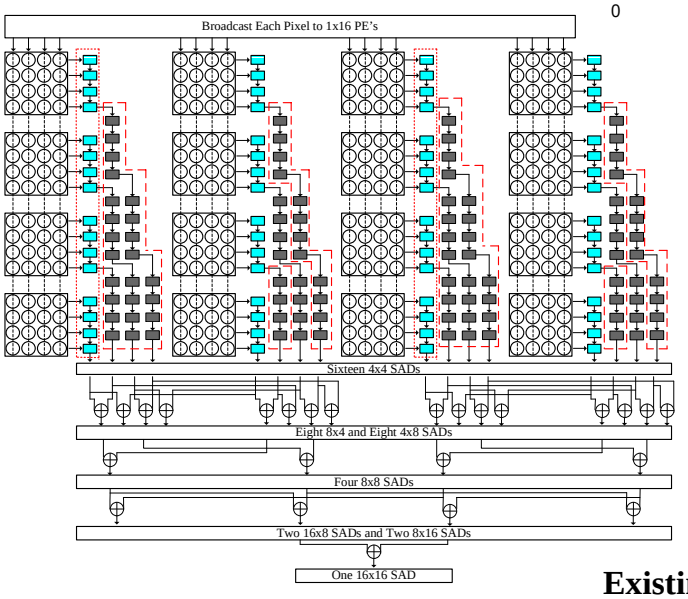
Large Frame Size Video Sequence

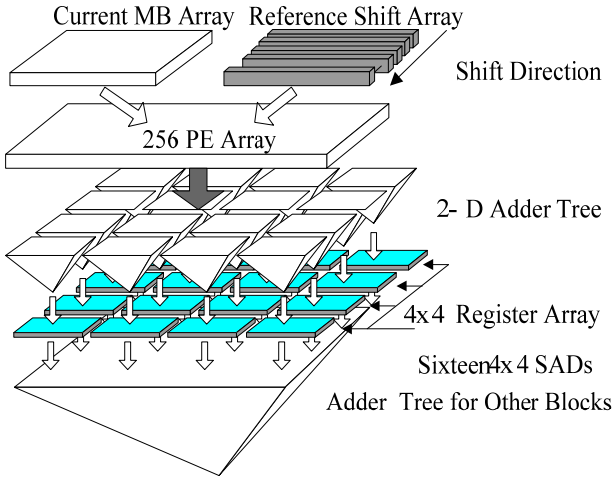
- **HDTV 720p**

Hardware Architecture of IME

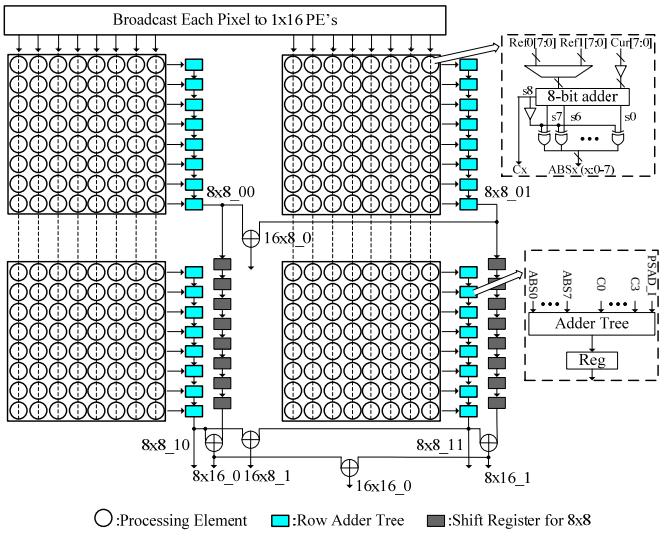
- **Mode Reduction impact**
- **High Speed Impact**
- **Adder Tree Improvement**

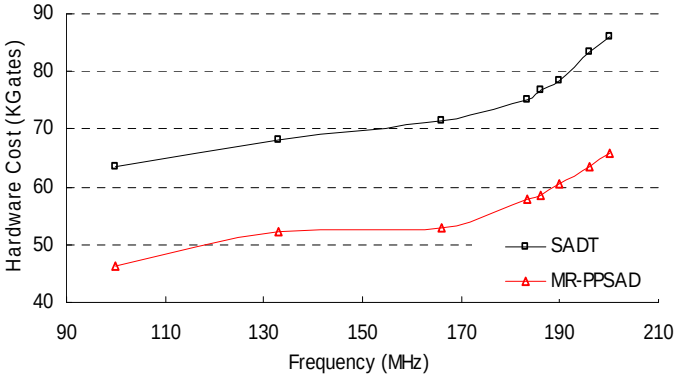






Existing Structures





Under frequencies ranging from 100 to 200MHz, MR-PPSAD structure also outperforms SAD Tree when multiple sets of PE array is considered

Optimized Structure & Hardware Cost Comparison

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