



## A FREQUENCY DOMAIN APPROACH TO INTRA MODE SELECTION IN H.264/AVC (WedPmOR5)

### ★ Author(s) :

Andy Yu

(University of Warwick, United Kingdom)

Graham Martin

(University of Warwick, United Kingdom)

Heechan Park

(University of Warwick, United Kingdom)

### ★ Abstract :

Multiple intra-mode prediction is one of the new features introduced in the emerging video standard, H.264/AVC. Its function is to further reduce spatial redundancies in an intra-coded macroblock prior to conventional transform coding and entropy coding. However, the process is computationally expensive especially when Lagrangian cost evaluation is employed. In this paper, we propose a fast algorithm operating in the frequency domain to accelerate intra-frame mode selection. Extensive simulations verify that the proposed algorithm outperforms several existing methods, providing speed-ups of up to 75% with insignificant degradation in picture quality.