
# LOSSLESS CODING USING VARIABLE BLOCK−SIZE ADAPTIVE PREDICTION OPTIMIZED FOR EACH IMAGE (WedAmPO3)

**Author(s) :**

Ichiro Matsuda (Science University of Tokyo, Japan)
Nau Ozaki (Science University of Tokyo, Japan)
Yuji Umezu (Science University of Tokyo, Japan)
Susumu Itoh (Science University of Tokyo, Japan)

**Abstract :**

This paper proposes an efficient lossless coding scheme for still images. The scheme employs a block−adaptive prediction technique to remove spatial redundancy in a given image. The resulting prediction errors are encoded using context−adaptive arithmetic coding. Several coding parameters, which must be sent to a decoder as side information, are iteratively optimized for each image so that the number of coding bits including the side information can have a minimum. Moreover, quadtree−based variable block−size partitioning is introduced into the above adaptive prediction technique. Experimental results show that the proposed coding scheme attains the best coding performance among the current state−of−the−art lossless coding schemes.

Menu