Abstract

Switched prediction algorithms are widely used for lossless image compression including Bayer image compression. All switched predictions algorithms have the same structure consisting of two separate functions working in tandem: A local pixel pattern function, or context classifier, and a set of pixel-value prediction functions. For each local context a different prediction function is selected. In this article we describe a new switched prediction algorithm specifically for lossless Bayer image compression. The new algorithm uses generic context classifier which may be used with any set of prediction functions. We show that using the generic context classifier we obtain a substantial improvement in lossless Bayer image compression. The new context classifier is both simple and fast to implement with a low memory requirement.

References


**Index Terms**

Computer Science  
Image Processing

**Keywords**

Lossless image compression, Bayer image compression, switched prediction, inter-color context, JPEG-LS, CALIC