L–Infinity Progressive Image Compression

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Abstract :  
This paper presents a lossless image coding approach that produces an embedded bit–stream optimized for L–infinity–constrained decoding. The decoder is implementable using only integer arithmetic and is able to deduce from the bit–stream the L–infinity error that affects the reconstructed image at an arbitrary point of decoding. The lossless coding performance is compared with JPEG–LS and JPEG2000. Operational rate–distortion curves, in the L–infinity sense, are presented and compared with JPEG2000.