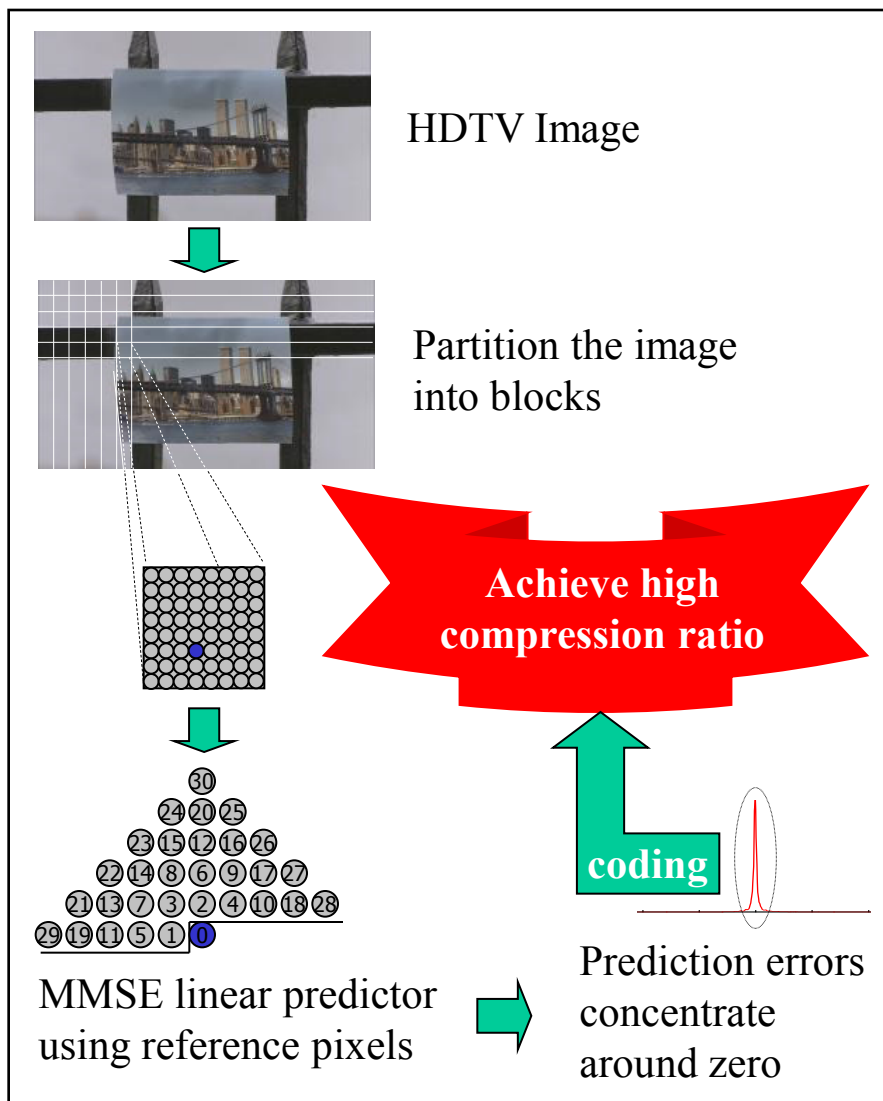


Lossless Compression Method for HDTV Image

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Content:

Lossless image compression is needed in the areas of medical imaging, high-definition image analysis, archives for art, etc. We are studying a lossless image compression method for one frame of High-Definition television (HDTV).

In our method, we divide an image into small blocks, and classify them into classes each of which corresponds to one minimum mean square error (MMSE) linear predictor which uses reference pixels. We propose a novel method for optimizing the number and the arrangement of reference pixels based on variable selection technique which uses F-statistic in multiple linear regression analysis. As a result of experiments, it is confirmed that our method achieves higher compression ratios and faster processing speed, than conventional one.

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