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(54) **LOSSLESS IMAGE ENCODING/DECODING METHOD AND APPARATUS USING INTER-COLOR PLANE PREDICTION**

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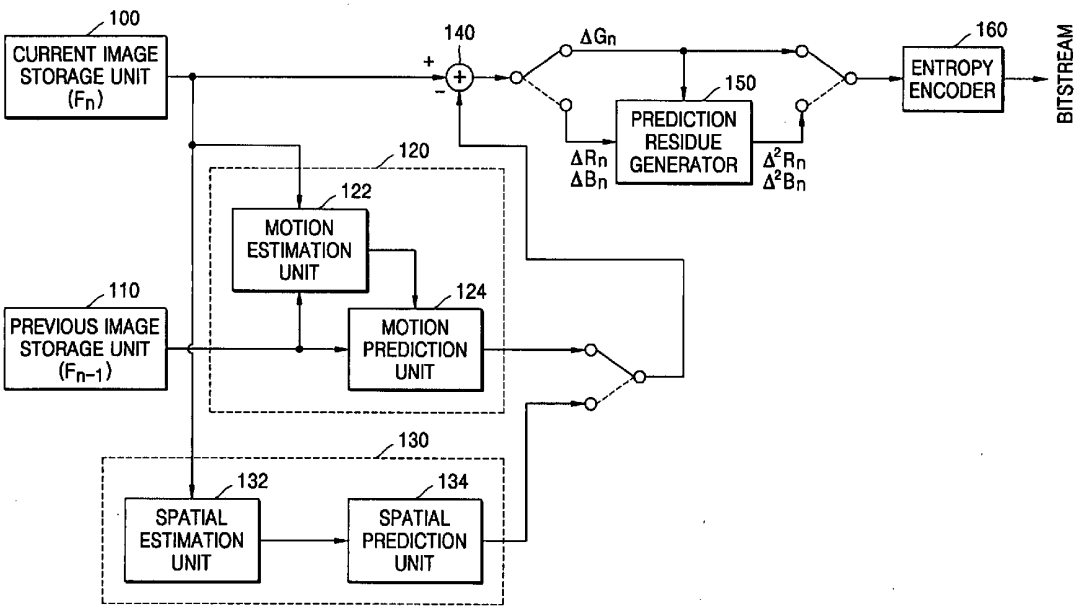
(57) **ABSTRACT**

A lossless image encoding/decoding method and apparatus. The lossless color image encoding apparatus includes a motion prediction image generator estimating a motion between a previous image and a current image and outputting a corresponding prediction image, a residue generator generating a temporal residue corresponding to a difference between a prediction image generated by the motion prediction image generator and the corresponding block of the current image with respect to different components of the color image, a prediction residue generator generating prediction residues by defining a linear-transformed value of one residue among the different components of the color image output from the residue generator as a predictor and using differences between each of the residues of the other components and the predictor, and an entropy encoder receiving the residue forming the predictor from the residue generator and the prediction residues from the prediction residue generator and generating a bitstream. Encoding methods, decoding apparatuses, and decoding methods can be implemented similarly.