ABSTRACT

An image coding apparatus according to the present invention comprises, as shown in figure 1, a blocking unit 2 for blocking an image signal comprising plural pixel values corresponding to a single image display region into blocks each comprising a prescribed number of pixels, and outputting, block by block, the prescribed number of pixel values constituting the image signal in each block; pixel value replacing means for replacing a pixel value of an uncoded pixel among peripheral pixels positioned in the vicinity of a coding target pixel, with a pseudo pixel value that is obtained from a pixel value of a coded pixel among the peripheral pixels on the basis of a prescribed rule; and an encoder 16a for receiving the image signal comprising plural pixel values corresponding to each block, performing, for each block, a coding process in which the respective pixel values are successively coded on the basis of the pixel value of the coded pixel and the pseudo pixel value of the uncoded pixel, and outputting an coded image signal.

In the image coding apparatus 101 thus constructed, it is possible to combine an adaptive pixel-by-pixel coding process and a block-by-block coding process without degrading correlation of pixel values between the uncoded

pixel and the coding target pixel, with avoiding that decoding of a coded signal becomes difficult. Thereby, influence of transmission error can be converged block by block, and the coding efficiency can be improved as compared with the simple block-by-block coding process, and further, on the decoder side, a decoding process for a coded signal which has been coded without degrading the prediction efficiency of the coding target pixel can be performed accurately.