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(54) Title: NN-BASED IN LOOP FILTER ARCHITECTURES WITH SEPARABLE CONVOLUTION AND SWITCHING ORDER OF DECOMPOSITION

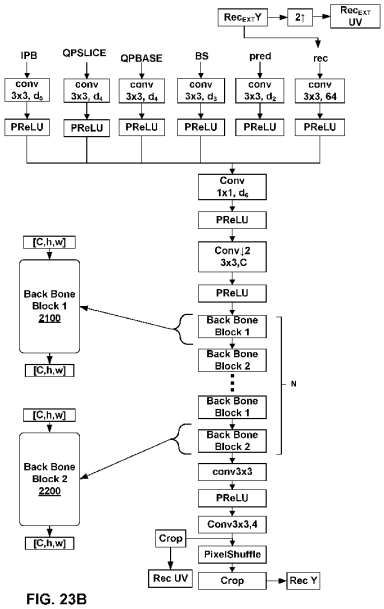

FIG. 23B

(57) Abstract: A device for decoding video data receives a picture of video data; reconstructs a block of the picture of video data to generate a reconstructed block; applies a neural network (NN)-based filter process to the reconstructed block to generate a filtered block, wherein the NN-based filter process includes a first backbone block process followed by a second backbone block process, wherein the first backbone block process comprises a first MxN convolution followed by a first NxM convolution, and the second backbone block process comprises a second NxM convolution followed by a second MxN convolution, wherein N and M are different integer values; determines a decoded block of video data based on the filtered block; and outputs a decoded version of the picture, wherein the decoded version of the picture comprises the decoded block of video data.

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