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(54) Title: SUBSTITUTIONAL QUALITY FACTOR LEARNING FOR QUALITY-ADAPTIVE NEURAL NETWORK-BASED LOOP FILTER

(57) Abstract: A method, apparatus, and non-transitory computer-readable medium for adaptive neural image compression by meta-learning using substitute QF settings, which includes generating one or more substitute quality factors via a plurality of iterations using the original quality factors, wherein the substitute quality factors are a modified version of the original quality factors. The approach may further include determining a neural network based loop filter comprising neural network based loop filter parameters and a plurality of layers, wherein the neural network based loop filter parameters include shared parameters and adaptive parameters, and may further include generating enhanced video data, based on the one or more substitute quality factors and the input video data, using the neural network based loop filter.