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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: RATE-DISTORTION DEFINED INTERPOLATION FOR VIDEO CODING BASED ON FIXED FILTER OR ADAPTIVE FILTER

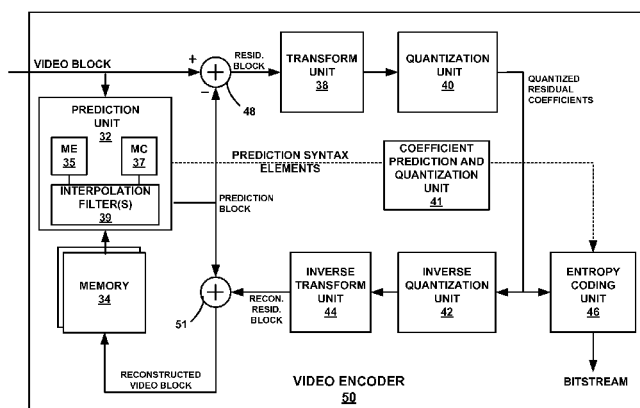


FIG. 2

(57) Abstract: This disclosure describes filtering techniques applied by an encoder and a decoder during the prediction stage of a video encoding and/or decoding process. The filtering techniques may enhance the accuracy of predictive data used during fractional interpolation, and may improve predictive data of integer blocks of pixels. There are several aspects to this disclosure, including a useful twelve-pixel filter support that may be used for interpolation, techniques that use coefficient symmetry and pixel symmetry to reduce the amount of data needed to be sent between an encoder and a decoder to configure the filter support for interpolation, and techniques for filtering data at integer pixel locations in a manner that is similar to sub-pixel interpolation. Other aspects of this disclosure concern techniques for encoding information in the bitstream to convey the type of filter used, and possibly the filter coefficients used. Predictive coding of filter coefficients is also described.



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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
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- *with international search report (Art. 21(3))*