(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 3 402 193 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
14.11.2018 Bulletin 2018/46

(21) Application number: **18181946.7**

(22) Date of filing: **14.08.2009**

(51) Int Cl.:
H04N 19/149 *(2014.01)* ***H04N 19/117*** *(2014.01)*
H04N 19/186 *(2014.01)* ***H04N 19/187*** *(2014.01)*
H04N 19/33 *(2014.01)* ***H04N 19/86*** *(2014.01)*
H04N 19/40 *(2014.01)* ***H04N 19/59*** *(2014.01)*

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

(30) Priority: **25.08.2008 US 197922**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
09811934.0 / 2 316 224

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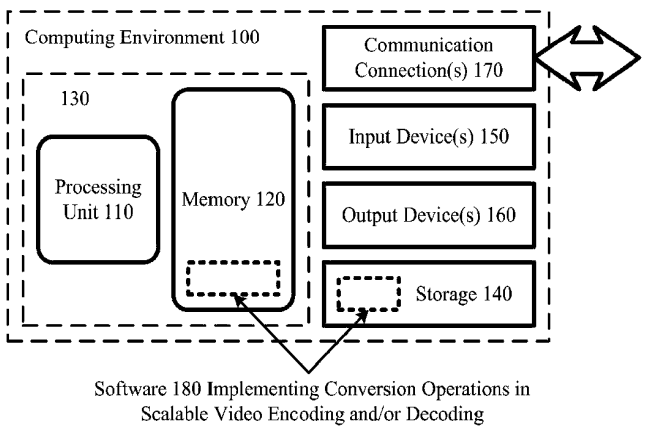
Remarks:
This application was filed on 05-07-2018 as a divisional application to the application mentioned under INID code 62.

(54) CONVERSION OPERATIONS IN SCALABLE VIDEO ENCODING AND DECODING

(57) Techniques and tools for conversion operations between modules in a scalable video encoding tool or scalable video decoding tool are described. For example, given reconstructed base layer video in a low resolution format (e.g., 4:2:0 video with 8 bits per sample) an encoding tool and decoding tool adaptively filter the reconstructed base layer video and upsample its sample values to a higher sample depth (e.g., 10 bits per sample). The tools also adaptively scale chroma samples to a higher chroma sampling rate (e.g., 4:2:2). The adaptive filtering and chroma scaling help reduce energy in inter-layer residual video by making the reconstructed base layer video closer to input video, which typically makes compression of the inter-layer residual video more efficient. The encoding tool also remaps sample values of the inter-layer residual video to adjust dynamic range before encoding, and the decoding tool performs inverse remapping after decoding.

Figure 1



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