

CLAIMS

1. A video coding device (100), comprising:
 - a sequence of filters (110; 300; 700; 1000; 1200) that are configurable by one or more primary parameters and one or more secondary parameters, and
 - a filter controller (120) configured to adjust the one or more secondary parameters based on the one or more primary parameters and based on a strength criterion of the sequence of filters.
2. The video coding device (100) of claim 1, wherein the strength criterion comprises:
 - a smoothness criterion,
 - a ratio of an amplification factor for a high-frequency domain and an amplification factor for a low-frequency domains, and/or
 - a ratio of a contrast value before filtering and a contrast value after filtering.
3. The video coding device (100) of one of the previous claims, wherein the one or more primary parameters are predetermined parameters, in particular parameters that are predetermined from an encoded bitstream, a user setting and/or a parameter search loop at an encoding device.
4. The video coding device (100) of one of the previous claims, wherein the sequence of filters (110; 300; 700; 1000; 1200) comprises one or more primary filters that are configurable by one or more primary parameters and one or more secondary filters that are configurable by one or more secondary parameters, wherein the one or more primary filters are located in the sequence of filters before the one or more secondary filters.
5. The video coding device (100) of one of the previous claims, wherein the sequence of filters (110; 300; 700; 1000; 1200) comprises:
 - a reference sample filter (310; 710) configured to adaptively filter one or more neighbouring samples of a current video block to obtain one or more reference samples, and

- an interpolation filter (320; 720; 1010) configured to predict one or more samples of the current video block using an interpolation of the one or more reference samples,
wherein the one or more primary parameters comprise a reference parameter of the reference sample filter and the one or more secondary parameters comprise a selection parameter of the interpolation filter, wherein the interpolation filter is configured to use an interpolation method according to the selection parameter.
- 6. The video coding device (100) of one of the previous claims, wherein the one or more primary parameters include a reference samples filter flag of a reference samples filter and the one or more secondary parameters include a filter strength parameter of an intra-prediction interpolation filter.
- 7. The video coding device (100) of one of the previous claims, wherein the sequence of filters (110; 300; 700; 1000; 1200) comprises a boundary smoothing filter (340; 730) which is configured to perform boundary smoothing for one or more transform units that belong to one or more prediction units that meet a size constraint.
- 8. The video coding device (100) of one of the previous claims, wherein the one or more primary parameters includes a direction parameter of a predicted block filter and the one or more secondary parameters include an on-off parameter of a boundary smoothing filter.
- 9. The video coding device (100) of one of the previous claims, wherein the sequence of filters (110; 300; 700; 1000; 1200) comprises:
 - a sub-pixel interpolation filter configured to adaptively filter samples of a reference block to obtain an interpolated reference block, and
 - a low pass and/or a high pass filter configured to smoothen and/or sharpen the interpolated reference block to obtain a filtered reference block,wherein the one or more primary parameters comprise an interpolation parameter of the interpolation filter and the one or more secondary parameters comprise a selection parameter of the sharpening and/or smoothing filters, wherein the filter controller (120) is configured to derive the secondary parameters based on the interpolation parameter of the interpolation filter.

10. The video coding device (100) of one of the previous claims, wherein the sequence of filters (110; 300; 700; 1000; 1200) comprises an adaptive loop filter configured to use a selected codebook to indicate one or more filter coefficients in a bitstream, wherein the filter controller is configured to select the codebook out of a plurality of codebooks based on the one or more primary parameters.
11. The video coding device (100) of one of the previous claims, wherein the sequence of filters (110; 300; 700; 1000; 1200) further comprises:
- a deblocking filter (1210) configured to process vertical edges based on a vertical filter strength parameter and horizontal edges based on a horizontal filter strength parameter,
 - a sample adaptive offset, SAO, filter (1220) configured to classify pixels and add offset values to the pixels in accordance with a SAO class parameter, and
 - an adaptive loop filter (1230) configured to use two or more codebooks to indicate one or more filter coefficients in a bitstream,
- wherein the one or more primary parameters comprise the SAO class parameter and a SAO type parameter of the SAO filter and the one or more secondary parameters comprise the horizontal filter strength parameter and the vertical strength parameter wherein the filter controller (120) is configured to derive the secondary parameters based on the SAP class parameter and/or the SAO type parameter of the SAO filter, and/or wherein the filter controller (120) is configured to select the two or more codebooks based on the SAO type parameter.
12. A method (200; 400; 500; 600; 800; 900; 1100; 1300; 1400; 1500; 1600) for configuring a sequence of filters (110; 300; 700; 1000; 1200) for video coding, the method comprising:
- adjusting one or more secondary parameters based on one or more primary parameters and based on a strength criterion of the sequence of filters, and
 - configuring the sequence of filters with the primary and secondary parameters.
13. The method (200; 400; 500; 600; 800; 900; 1100; 1300; 1400; 1500; 1600) of claim 12, further comprising an initial step of determining the one or more primary parameters from a bitstream.

14. A computer-readable storage medium storing program code, the program code comprising instructions for carrying out the method of one of claims 12 and 13.