

CLAIMS

1. A method for video encoding, comprising:
determining one or more chroma residual scaling parameters based one or
5 more luma mapping parameters and based on a corrective value of the one or
more chroma residual scaling parameters; and
encoding the video based on the determined one or more chroma residual
scaling parameters.
- 10 2. A method for video decoding, comprising:
determining one or more chroma residual scaling parameters based on one
or more luma mapping parameters and based on a corrective value of the one or
more chroma residual scaling parameters; and
15 decoding the video based on the determined one or more chroma residual
scaling parameters.
3. An apparatus for video encoding, comprising one or more processors,
wherein the one or more processors are configured to:
determine one or more chroma residual scaling parameters based on one
20 or more luma mapping parameters and based on a corrective value of the one or
more chroma residual scaling parameters; and
encode the video based on the determined one or more chroma residual
scaling parameters.
- 25 4. An apparatus for video decoding, comprising one or more processors,
wherein the one or more processors are configured to:
determine one or more chroma residual scaling parameters based one or
more luma mapping parameters and based on a corrective value of the one or
more chroma residual scaling parameters; and
30 decode the video based on the determined one or more chroma residual
scaling parameters.

5. The method of claim 1, or the apparatus of claim 3, wherein the corrective value of the one or more chroma residual scaling parameters is determined based on a luma quantization parameter value.

5 6. The method or apparatus of claim 5, wherein the luma quantization parameter value is not dependent on another luma quantization parameter value used for collocated luma samples of a chroma block for which the one or more chroma residual scaling parameters are being determined.

10 7. The method or apparatus of any one of claims 5 and 6, wherein the corrective value of the one or more chroma residual scaling parameters is based on an average value of selected luma samples.

15 8. The method of any one of claims 1, 2, and 5-7, or the apparatus of any one of claims 3-7, wherein the luma mapping parameters are representative of a slope of a luma forward mapping function applied to a prediction of luma samples.

20 9. The method of any one of claims 1, 2 and 5-8, or the apparatus of any one of claims 3-8, further comprising signaling of said corrective value of the one or more chroma residual scaling parameters.

25 10. The method of claim 9, or the apparatus of claim 9, wherein said corrective value of the one or more chroma residual scaling parameters is signaled as adaptive parameter in APS.

30 11. The method of any one of claims 8-10 or the apparatus of any one of claims 8-10, wherein the corrective value of the one or more chroma residual scaling parameters is an additive value to be added to the luma mapping parameters resulting in corrected luma mapping slope values.

12. The method of claim 11, wherein the chroma residual scaling parameters are derived by inverting the corrected luma mapping slope values.

13. The method of any one of claims 8-12, or the apparatus of any one of claims 8-12, wherein the corrective value of the one or more chroma residual scaling parameters is in the range $[-7, 7]$.

5 14. The method of claim 13, or the apparatus of claim 13, wherein the corrected luma mapping slope values are bounded.

10 15. The method of claim 14, or the apparatus of claim 14, wherein the corrected luma mapping slope values in the range $(OrgCW > 3)$ to $(OrgCW < -3)$, inclusive where OrgCW represents a neutral value of scaling.

15 16. A bitstream, wherein the bitstream is formed by:
 determining one or more chroma residual scaling parameters based one or
 more luma mapping parameters and based on a corrective value of the one or
 more chroma residual scaling parameters; and
 encoding a video based on the determined one or more chroma residual
 scaling parameters; and
 forming the bitstream comprising the encoded video.

20 17. The bitstream of claim 16 further comprising said corrective value of the one or more chroma residual scaling parameters

25 18. A non-transitory computer readable medium containing data content generated according to the method comprising:
 determining one or more chroma residual scaling parameters based one or
 more luma mapping parameters and based on a corrective value of the one or
 more chroma residual scaling parameters; and
 encoding a video based on the determined one or more chroma residual
 scaling parameters; and
30 forming the data content comprising the encoded video.

19. A non-transitory computer readable medium of claim 18 wherein data content further comprises said corrective value of the one or more chroma residual scaling parameters

20. A computer program product comprising instructions for performing the method of any one of claims 1, 2 and 5-15, when executed by one of more processors.

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21. A non-transitory computer readable medium containing instructions for performing the method of any one of claims 1, 2 and 5-15, when executed by one of more processors.