

CLAIMS

1. A method of video processing, comprising:
performing a conversion between a current video block of a video and a coded representation of the current video block according to a rule,
wherein the rule specifies that, due to use of an identity transform coding tool for representing the current video block into the coded representation, a syntax field indicative of a quantization parameter used for decoding the current video block is included such that a value of the quantization parameter is modified according to a rule,
wherein the identity transform coding tool allows coefficient values at a transform domain of the current block to be same as values of a residual block of the current video block.
2. The method of claim 1, wherein the value of the quantization parameter is modified based on a luma quantization parameter range offset (QpBdOffsety) and/or a chroma quantization parameter range offset (QpBdOffsetc).
3. The method of claim 1, wherein the value of the quantization parameter is modified based on a fixed offset.
4. The method of claim 1, the value of the quantization parameter is modified based on an input bitdepth.
5. The method of claim 1, wherein the value of the quantization parameter is modified based on an internal bitdepth and an input bitdepth.
6. The method of any of claims 1 to 5, wherein the identity transform coding tool corresponds to a transform skip mode in which a transform and inverse transform processes are skipped.
7. The method of any of claims 1 to 5, wherein the identity transform coding tool corresponds to a quantized residual block differential pulse-code modulation (QP-BDPCM) mode in which a

block differential pulse code modulation is applied to a quantized residual block corresponding to the current video block.

8. The method of any of claims 1 to 7, wherein the rule specifies to apply a clipping process to the quantization parameter in a case that the syntax element is equal to 1.

9. The method of claim 8, wherein the quantization parameter is set to a value that is a sum of 4 and the luma quantization parameter range offset (QpBdOffsety) in a case that the quantization parameter is smaller than the luma quantization parameter range offset (QpBdOffsety).

10. The method of claim 8, wherein the quantization parameter is set to a certain value in a case that the quantization parameter is smaller than the certain value.

11. The method of claim 8, wherein the quantization parameter is set to $(4 + 6 * (bd - bdi))$ in a case that the quantization parameter is smaller than $(4 + 6 * (bd - bdi))$, wherein bd indicating the internal bitdepth and bdi indicating the input bitdepth.

12. The method of any of claim 1 to 7, wherein the rule specifies to add an offset to the quantization parameter (QP_{dec}) to obtain modified quantization parameter in a case that the syntax element is equal to 1.

13. The method of any one of claims 1 to 7, wherein the modified quantization parameter corresponds to a sum of QP_{dec} , 4, and the luma quantization parameter range offset (QpBdOffsety) or a sum of QP_{dec} and 4.

14. The method of claims 4 to 12, wherein the modified quantization parameter corresponds to a value obtained by an equation, $QP_{dec} + (4 + 6 * (bdi - 8))$, bdi indicating the input bitdepth.

15. The method of any one of claims 1 to 14, wherein modified quantization parameter is used for processing a subsequent block of the video, the processing of the subsequent block including

using at least one of multiple parameters including a delta quantization parameter for a quantization, a dequantization, a filtering, or a prediction operation.

16. The method of any of claims 1 to 15, wherein the value of the quantization parameter is obtained independently of an internal bitdepth QP offset.

17. The method of any of claims 1 to 15, wherein the value of the quantization parameter is obtained without adding a luma quantization parameter range offset (QpBdOffset).

18. The method of any of claims 1 to 15, wherein the value of the quantization parameter is obtained using an internal bitdepth QP offset.

19. A method of video processing, comprising:

performing a conversion between a current video block of a video and a coded representation of the current video block,

wherein the coded representation conforms to a formatting rule specifying a selective inclusion of a syntax element indicative of use of a coding tool using an identity transform based on quantization parameter included in the coded representation.

20. The method of claim 19, wherein the coding tool corresponds to a transform skip mode in which a transform and inverse transform processes are skipped or corresponds to a quantized residual block differential pulse-code modulation (QP-BDPCM) mode in which a block differential pulse code modulation is applied to a quantized residual block corresponding to the current video block.

21. The method of claim 19, wherein the formatting rule specifies not to include the syntax element based on a value of the quantization parameter.

22. The method of claim 21, wherein the formatting rule specifies not to include the syntax element in a case that the value of the quantization parameter is smaller than 4 or smaller than a sum of 4 and a luma quantization parameter range offset.
23. The method of any of claims 19 to 22, wherein the syntax element includes `transform_skip_flag` and/or `intra_bdpcm_flag`.
24. A method of video processing, comprising:
performing a conversion between a current video block of a video and a coded representation of the current video block,
wherein the coded representation conforms to a formatting rule specifying that a syntax element indicative of an input bit depth of the video is included in the coded representation.
25. The method of claim 24, wherein the syntax element (`input_bitdepth - 8`) is included in a sequence parameter set (SPS) or a video parameter set (VPS) to indicate the input bit depth and has a value obtained by subtracting 8 from the input bit depth.
26. The method of claim 24, wherein the syntax element (`internal_bitdepth - input_bitdepth`) is included in a sequence parameter set (SPS) or a video parameter set (VPS) to indicate the input bit depth and has a value obtained by subtracting the input bit depth from an internal bitdepth.
27. The method of claim 25 or 26, wherein the syntax element has a range between 0 and `dQP`, where `dQP` is a fixed value.
28. A method of video processing, comprising:
determining, for a conversion between a video block of a video unit of a video and a coded representation of the video, whether to perform a pre-processing operation or a post processing operation on the video block based on a quantization parameter associated with the video block or the video unit; and
performing the conversion based on the determining.

29. The method of claim 28, wherein the pre-processing operation corresponds to a luma mapping with chroma scaling (LMCS) operation in which luma samples of the current video block are reshaped between a first domain and a second domain and chroma residual is scaled in a luma-dependent manner.
30. The method of claim 28, wherein the post processing operation corresponds to a filtering operation performed after reconstructing of the current video block.
31. The method of claim 28, wherein the pre-processing operation and/or the post processing operation is disallowed in a case that the quantization parameter is smaller than a threshold.
32. The method of claim 31, wherein the threshold is predefined.
33. The method of claim 31, wherein the quantization parameter is modified according to a rule.
34. The method of claim 28, wherein a deblocking operation is not performed in a case that the quantization parameter (QP) is smaller than $(4+6*(bd-bdi))$, the bd is an internal bit depth and the bdi indicating an input bitdepth.
35. The method of claim 28, wherein an adaptive loop filtering operation is not performed in a case that the quantization parameter (QP) is smaller than $(4+6*(bd-bdi))$, the bd indicating an internal bitdepth and the bdi indicating an input bitdepth.
36. The method of claim 28, wherein a sample-adaptive offset operation is not performed in a case that the quantization parameter (QP) is smaller than $(4+6*(bd-bdi))$, the bd indicating an internal bitdepth and the bdi indicating an input bitdepth.

37. The method of claim 28, wherein a luma mapping with chroma scaling (LMCS) operation is not performed in a case that the quantization parameter (QP) is smaller than $(4+6*(bd-bdi))$, the bd indicating an internal bitdepth and the bdi indicating an input bitdepth.
38. The method of any of claims 1 to 37, wherein the performing of the conversion includes generating the coded representation from the video.
39. The method of any of claims 1 to 37, wherein the performing of the conversion includes generating the video from the coded representation.
40. A video processing apparatus comprising a processor configured to implement a method recited in one or more of claims 1 to 39.
41. A computer readable medium storing program code that, when executed, causes a processor to implement a method recited in one or more of claims 1 to 39.