

CLAIMS

1. A method of processing video data, comprising:

determining, for a conversion between a current video block of a video and a bitstream of the video, to clip a quantization parameter indicated by a syntax field for the current video block coded with a transform skip mode in which transform and inverse transform processes are skipped;

clipping a value of the quantization parameter based on a variable indicating a minimum allowed quantization parameter for the transform skip mode; and

performing the conversion based on the clipping;

wherein the value of the variable is greater than or equal to 4,

wherein the value of the variable is equal to $(4+X)$, wherein X is a pre-defined value being greater than or equal to 0,

wherein $X=6*Y$, wherein Y is determined based on at least one syntax element included in the bitstream.

2. The method of claim 1, wherein in the clipping, the value of the quantization parameter is set to the value of the variable if the value of the quantization parameter is smaller than the value of the variable.

~~3. The method of claim 1 or 2, wherein the value of the variable is greater than 0.~~

~~4. The method of claim 1 or 2, wherein the value of the variable is greater than or equal to 4.~~

~~5. The method of claim 4, wherein the value of the variable is equal to $(4+X)$, wherein X is a pre-defined value being greater than or equal to 0.~~

~~6. The method of claim 5, wherein $X=6*Y$, wherein Y is determined based on at least one syntax element included in the bitstream.~~

73. The method of claim 61, wherein $Y = bd - bdi$, wherein bd is an internal bitdepth of coding the video, bdi is an input bitdepth of the video.

84. The method of ~~any of claims 1-7~~ claim 1, wherein the current video block is coded based on a differential coding mode, wherein in the differential coding mode, differences between quantized residuals derived with an intra prediction mode of the current video block and predictions of the quantized residuals are included in the bitstream.

95. The method of ~~any of claims 1-8~~ claim 1, wherein the conversion comprises encoding the current video block into the bitstream.

106. The method of ~~any of claims 1-8~~ claim 1, wherein the conversion comprises decoding the current video block from the bitstream.

117. An apparatus for processing video data comprising a processor and a non-transitory memory with instructions thereon, wherein the instructions upon execution by the processor, cause the processor to:

determine, for a conversion between a current video block of a video and a bitstream of the video, to clip a quantization parameter indicated by a syntax field for the current video block coded with a transform skip mode in which transform and inverse transform processes are skipped;

clip a value of the quantization parameter based on a variable indicating a minimum allowed quantization parameter for the transform skip mode; and

perform the conversion based on the clipping;

wherein the value of the variable is greater than 4,

wherein the value of the variable is equal to $(4+X)$, wherein X is a pre-defined value being greater than or equal to 0,

wherein $X = 6 * Y$, wherein Y is determined based on at least one syntax element included in the bitstream.

~~128.~~ The apparatus of claim ~~11~~7, wherein in the clipping, the value of the quantization parameter is set to the value of the variable if the value of the quantization parameter is smaller than the value of the variable.

~~13.~~ ~~The apparatus of claim 11 or 12, wherein the value of the variable is greater than 0.~~

~~14.~~ ~~The apparatus of claim 11 or 12, wherein the value of the variable is greater than 4.~~

~~15.~~ ~~The apparatus of claim 14, wherein the value of the variable is equal to $(4+X)$, wherein X is a pre-defined value being greater than or equal to 0.~~

~~16.~~ ~~The apparatus of claim 15, wherein $X=6*Y$, wherein Y is determined based on at least one syntax element included in the bitstream.~~

~~179.~~ The apparatus of ~~any of claims 11-16~~claim 7, wherein the current video block is coded based on a differential coding mode, wherein in the differential coding mode, differences between quantized residuals derived with an intra prediction mode of the current video block and predictions of the quantized residuals are included in the bitstream.

~~1810.~~ A non-transitory computer-readable storage medium storing instructions that cause a processor to:

determine, for a conversion between a current video block of a video and a bitstream of the video, to clip a quantization parameter indicated by a syntax field for the current video block coded with a transform skip mode in which transform and inverse transform processes are skipped;

clip a value of the quantization parameter based on a variable indicating a minimum allowed quantization parameter for the transform skip mode; and

perform the conversion based on the clipping;

wherein the value of the variable is greater than or equal to 4,

wherein the value of the variable is equal to $(4+X)$, X is a pre-defined value being greater than or equal to 0, and

wherein $X=6*Y$, wherein Y is determined based on at least one syntax element included in the bitstream.

11. The non-transitory computer-readable storage medium of claim 10, wherein in the clipping, the value of the quantization parameter is set to the value of the variable if the value of the quantization parameter is smaller than the value of the variable.

12. The non-transitory computer-readable storage medium of claim 10, wherein $Y=bd-bdi$, wherein bd is an internal bitdepth of coding the video, bdi is an input bitdepth of the video.

13. The non-transitory computer-readable storage medium of claim 10, wherein the current video block is coded based on a differential coding mode, wherein in the differential coding mode, differences between quantized residuals derived with an intra prediction mode of the current video block and predictions of the quantized residuals are included in the bitstream.

~~19. The non-transitory computer-readable storage medium of claim 18, wherein in the clipping, the value of the quantization parameter is set to the value of the variable if the value of the quantization parameter is smaller than the value of the variable;~~

~~—— the value of the variable is greater than 0; or~~

~~—— the value of the variable is greater than or equal to 4,~~

~~—— wherein the value of the variable is equal to $(4+X)$, X is a pre-defined value being greater than or equal to 0, and~~

~~—— wherein $X=6*Y$, wherein Y is determined based on at least one syntax element included in the bitstream.~~

2014. A non-transitory computer-readable recording medium storing a bitstream of a video which is generated by a method performed by a video processing apparatus, wherein the method comprises:

determining, for a current video block of a video, to clip a quantization parameter indicated by a syntax field for the current video block coded with a transform skip mode in which transform and inverse transform processes are skipped;

clipping a value of the quantization parameter based on a variable indicating a minimum allowed quantization parameter for the transform skip mode; and

generating the bitstream based on the clipping;

wherein the value of the variable is greater than 4,

wherein the value of the variable is equal to $(4+X)$, wherein X is a pre-defined value being greater than or equal to 0,

wherein $X=6*Y$, wherein Y is determined based on at least one syntax element included in the bitstream.

15. The non-transitory computer-readable recording medium of claim 14, wherein in the clipping, the value of the quantization parameter is set to the value of the variable if the value of the quantization parameter is smaller than the value of the variable.

16. The non-transitory computer-readable recording medium of claim 14, wherein $Y=bd-bdi$, wherein bd is an internal bitdepth of coding the video, bdi is an input bitdepth of the video.

17. The non-transitory computer-readable recording medium of claim 14, wherein the current video block is coded based on a differential coding mode, wherein in the differential coding mode, differences between quantized residuals derived with an intra prediction mode of the current video block and predictions of the quantized residuals are included in the bitstream.