CLAIMS

1. A method of processing video data, comprising:

determining, during a conversion between a current chroma video block of a video and a bitstream of the video, that a scaling process is applied on chroma residual samples of the current chroma video block; and

performing the conversion by applying the scaling process on the chroma residual samples,

wherein in the scaling process, the chroma residual samples are scaled based on at least one scaling factor before being used to reconstruct the current chroma video block, and

wherein the at least one scaling factor is derived based on an averaged luma variable computed based on at least one neighboring luma block of a video unit of the video which is determined based on a luma sample corresponding to a top-left sample of the current chroma video block, and

wherein in response to a first neighboring luma block of the at least one neighboring luma block and the video unit being located in different video regions, the first neighboring luma block is treated as unavailable, and wherein the different video regions include at least one of a different slices or different tiles.

2. The method of claim 1, wherein the scaling process is performed based on a piecewise linear model, and wherein an index identifying a piece to which the averaged luma variable belongs, and the at least one scaling factor is derived based on the index.

3. The method of claim 1, wherein in response to the at least one neighboring luma block being unavailable, the averaged luma variable is set to a default fixed value.

4. The method of claim 3, wherein the default fixed value is used to find an index identifying the piece to which the default fixed value belongs, and the at least one scaling factor is calculated from the found index.

5. The method of claim 3, wherein the default fixed value depends on a bit depth of the video.

6. The method of claim 5, wherein the default fixed value is expressed as 1 << (bitDepth − 1), where bitDepth denotes the bit depth of the video.

7. The method of claim 1, wherein the at least one neighboring luma block is adjacent to the video unit.

8. The method of claim 1, wherein a location of the video unit is derived based on one or more characteristics of the current chroma video block or the video unit.

9. The method of claim 8, wherein the one or more characteristics include at least one of a block size and a location information.

10. The method of claim 8, wherein the one or more characteristics are refrained to be stored in a line buffer.

11. The method of claim 1, wherein the current chroma video block and the video unit are located inside a same coding tree unit.

12. The method of claim 1, wherein the current chroma video block and the video unit are located inside a same coding tree unit row.

13. The method of claim 1, wherein the conversion includes encoding the current chroma video block into the bitstream.

14. The method of claim 1, wherein the conversion includes decoding the current chroma video block from the bitstream.

15. 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, during a conversion between a current chroma video block of a video and a bitstream of the video, that a scaling process is applied on chroma residual samples of the current chroma video block; and

perform the conversion by applying the scaling process on the chroma residual samples,

wherein in the scaling process, the chroma residual samples are scaled based on at least one scaling factor before being used to reconstruct the current chroma video block, and

wherein the at least one scaling factor is derived based on an averaged luma variable computed based on at least one neighboring luma block of a video unit of the video which is determined based on a luma sample corresponding to a top-left sample of the current chroma video block, and

wherein in response to a first neighboring luma block of the at least one neighboring luma block and the video unit being located in different video regions, the first neighboring luma block is treated as unavailable, and wherein the different video regions include at least one of different slices or different tiles.

16. The apparatus of claim 15, wherein the scaling process is performed based on a piecewise linear model, and wherein an index identifying a piece to which the averaged luma variable belongs, and the at least one scaling factor is derived based on the index.

17. The apparatus of claim 15, wherein in response to the at least one neighboring luma block being unavailable, the averaged luma variable is set to a default fixed value.

18. The apparatus of claim 15, wherein the default fixed value is used to find an index identifying the piece to which the default fixed value belongs, and the at least one scaling factor is calculated from the found index.

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

determine, during a conversion between a current chroma video block of a video and a bitstream of the video, that a scaling process is applied on chroma residual samples of the current chroma video block; and

perform the conversion by applying the scaling process on the chroma residual samples,

wherein in the scaling process, the chroma residual samples are scaled based on at least one scaling factor before being used to reconstruct the current chroma video block, and

wherein the at least one scaling factor is derived based on an averaged luma variable computed based on at least one neighboring luma block of a video unit of the video which is determined based on a luma sample corresponding to a top-left sample of the current chroma video block, and

wherein in response to a first neighboring luma block of the at least one neighboring luma block and the video unit being located in different video regions, the first neighboring luma block is treated as unavailable, and wherein the different video regions include at least one of different slices or different tiles.

20. 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 that a scaling process is applied on chroma residual samples of the current chroma video block; and

generating the bitstream by applying the scaling process on the chroma residual samples,

wherein in the scaling process, the chroma residual samples are scaled based on at least one scaling factor before being used to reconstruct the current chroma video block, and

wherein the at least one scaling factor is derived based on an averaged luma variable computed based on at least one neighboring luma block of a video unit of the video which is determined based on a luma sample corresponding to a top-left sample of the current chroma video block, and

wherein in response to a first neighboring luma block of the at least one neighboring luma block and the video unit being located in different video regions, the first neighboring luma block is treated as unavailable, and wherein the different video regions include at least one of different slices or different tiles.