CLAIMS

1. A method of processing video data, comprising:

determining, for a conversion between a current video block of a current picture of a video and a bitstream of the video, that a first prediction mode is applied on the current video block;

maintaining, for the first prediction mode, a virtual buffer of a defined size comprising reference samples derived from a reference region from the current picture;

deriving, for the current video block, a prediction block determined by a block vector in the virtual buffer; and

performing the conversion at least based on the prediction block,

wherein availability of one or more reference samples in the virtual buffer is referred to for deriving the prediction block based on the size of a virtual unit.

2. The method of claim 1, wherein the size of the virtual buffer is m×W × n×H, where W denotes a width of the virtual unit, H denotes a height of the virtual unit, and m and n are integers.

3. The method of claim 2, wherein the values of m and n depend on the size of the coding tree block.

4. The method of claim 3, wherein m=4, and n=2.

5. The method of any one of claims 1-4, wherein a subset of reference samples determined based on the size of the virtual unit in the virtual buffer are unavailable for deriving the prediction block.

6. The method of claim 5, wherein the subset of reference samples locates at positions (x, y) in the virtual buffer, wherein x lies in a first predetermined range in the virtual buffer determined based on x0, and y lies in a second predetermined range in the virtual buffer determined based on y0, where (x0, y0) denotes an upper-left corner of a virtual unit.

7. The method of claim 6, wherein the first predetermined range and the second predetermined range are further determined based on Vsize,

wherein Vsize denotes the size of the virtual unit and Vsize = min(ctbSize, 64), and ctbSize denotes the size of the coding tree block including the current video block.

8. The method of claim 5, when the current video block contains one or more virtual units, the subset of reference samples is further determined based on the size of the current video block.

9. The method of any one of claims 1-8, wherein the virtual buffer is reset before coding a picture or a slice.

10. The method of any one of claims 1-9, wherein the conversion includes encoding the current video block into the bitstream.

11. The method of any one of claims 1-9, wherein the conversion includes decoding the current video block from the bitstream.

12. 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 current picture of a video and a bitstream of the video, that a first prediction mode is applied on the current video block;

maintain, for the first prediction mode, a virtual buffer of a defined size comprising reference samples derived from a reference region from the current picture;

derive, for the current video block, a prediction block determined by a block vector in the virtual buffer; and

perform the conversion at least based on the prediction block,

wherein availability of one or more reference samples in the virtual buffer is referred to for deriving the prediction block based on the size of a virtual unit.

13. The apparatus of claim 12, wherein the size of the virtual buffer is m×W × n×H, where W denotes a width of the virtual unit, H denotes a height of the virtual unit, and m and n are integers.

14. The apparatus any one of claims 12-13, wherein a subset of reference samples determined based on the size of the virtual unit in the virtual buffer are unavailable for deriving the prediction block.

15. The apparatus of claim 14, wherein the subset of reference samples locates at positions (x, y) in the virtual buffer, wherein x lies in a first predetermined range in the virtual buffer determined based on x0, and y lies in a second predetermined range in the virtual buffer determined based on y0, where (x0, y0) denotes an upper-left corner of the virtual unit.

16. The apparatus of claim 15, wherein the first predetermined range and the second predetermined range are further determined based on Vsize,

wherein Vsize denotes the size of the virtual unit and Vsize = min(ctbSize, 64), and ctbSize denotes the size of the coding tree block including the current video block.

17. The apparatus of claim 14, when the current video block contains one or more virtual units, the subset of reference samples is further determined based on the size of the current video block.

18. The apparatus any one of claims 12-17, wherein the virtual buffer is reset before coding a picture or a slice.

19. 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 current picture of a video and a bitstream of the video, that a first prediction mode is applied on the current video block;

maintain, for the first prediction mode, a virtual buffer of a defined size comprising reference samples derived from a reference region from the current picture;

derive, for the current video block, a prediction block determined by a block vector in the virtual buffer; and

perform the conversion at least based on the prediction block;

wherein availability of one or more reference samples in the virtual buffer is referred to for deriving the prediction block based on the size of a virtual unit.

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

determining, that a first prediction mode is applied on a current video block of a current picture of a video;

maintaining, for the first prediction mode, a virtual buffer of a defined size comprising reference samples derived from a reference region from the current picture;

deriving, for the current video block, a prediction block determined by a block vector in the virtual buffer; and

generating the bitstream from the current video block at least based on the prediction block,

wherein availability of one or more reference samples in the virtual buffer is referred to for deriving the prediction block based on the size of a virtual unit.