CLAIMS

1. A method of processing video data, comprising:

performing a conversion between a current block of a current region of a video and a bitstream of the video, wherein the conversion comprises using an adaptive loop filter for the current block, and wherein the bitstream is configured to indicate the adaptive loop filter using a two-part syntax element including:

a first part syntax element indicating whether a fixed filter set or a filter set from an adaptation parameter set (APS) is applied to the current block, and

a second part syntax element indicative of an index of the fixed filter set or the filter set from the APS,

wherein the bitstream comprises a third syntax element indicating a number of adaptive loop filter APSs used for the current region; and

wherein the first part syntax element is included in the bitstream in case that a value of the number is greater than zero.

2. The method of claim 1, wherein the first part syntax element being zero indicating that the fixed filter set is applied to the current block.

3. The method of claim 1, wherein the first part syntax element being one indicating that the filter set from the APS is applied to the current block.

4. The method of claim 1, wherein the bitstream excludes the first part syntax element when the number is equal to zero, and wherein the first part syntax element is inferred to indicate that the fixed filter set is applied to the current block.

5. The method of any of claims 1-4, wherein whether to include the index of the filter set from the APS in the bitstream is based on the number.

6. The method of claim 5, wherein the index of the filter set from the APS is included in the bitstream when the number is greater than 1.

7. The method of claim 5, wherein the index of the filter set from the APS is excluded from the bitstream when the number is equal to 1.

8. The method of any of claims 1-7, wherein the current region is a slice.

9. The method of any of claims 1-6 and 8, wherein the index of the filter set from the APS is coded with a truncated binary method.

10. The method of any of claims 1-6 and 8-9, wherein a maximum value of the index of the filter set from the APS is set to a number of allowed ALF APSs for the current region minus K, and wherein K = 1.

11. The method of any of claims 1-6 and 8-10, wherein all bins of a binarized bin string of the index of the filter set from the APS are bypass coded.

12. The method of any of claims 1-11, wherein the conversion includes encoding the video into the bitstream.

13. The method of any of claims 1-11, wherein the conversion includes decoding the video from the bitstream.

14. 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:

perform a conversion between a current block of a current region of a video and a bitstream of the video, wherein the conversion comprises using an adaptive loop filter for the current block, and wherein the bitstream is configured to indicate the adaptive loop filter using a two-part syntax element including:

a first part syntax element indicating whether a fixed filter set or a filter set from an adaptation parameter set (APS) is applied to the current block, and

a second part syntax element indicative of an index of the fixed filter set or the filter set from the APS,

wherein the bitstream comprises a third syntax element indicating a number of adaptive loop filter APSs used for the current region; and

wherein the first part syntax element is included in the bitstream in case that a value of the number is greater than zero.

15. The apparatus of claim 14, wherein the first part syntax element being zero indicating that the fixed filter set is applied to the current block;

wherein the first part syntax element being one indicating that the filter set from the APS is applied to the current block;

wherein the bitstream excludes the first part syntax element when the number is equal to zero, and wherein the first part syntax element is inferred to indicate that the fixed filter set is applied to the current block;

wherein whether to include the index of the filter set from the APS in the bitstream is based on the number;

wherein the index of the filter set from the APS is included in the bitstream when the number is greater than 1; and

wherein the index of the filter set from the APS is excluded from the bitstream when the number is equal to 1.

16. The apparatus of claim 14 or 15, wherein the current region is a slice;

wherein the index of the filter set from the APS is coded with a truncated binary method;

wherein a maximum value of the index of the filter set from the APS is set to a number of allowed ALF APSs for the current region minus K, and wherein K = 1; and

wherein all bins of a binarized bin string of the index of the filter set from the APS are bypass coded.

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

perform a conversion between a current block of a current region of a video and a bitstream of the video, wherein the conversion comprises using an adaptive loop filter for the current block, and wherein the bitstream is configured to indicate the adaptive loop filter using a two-part syntax element including:

a first part syntax element indicating whether a fixed filter set or a filter set from an adaptation parameter set (APS) is applied to the current block, and

a second part syntax element indicative of an index of the fixed filter set or the filter set from the APS,

wherein the bitstream comprises a third syntax element indicating a number of adaptive loop filter APSs used for the current region; and

wherein the first part syntax element is included in the bitstream in case that a value of the number is greater than zero.

18. The non-transitory computer-readable storage medium of claim 17, wherein the first part syntax element being zero indicating that the fixed filter set is applied to the current block;

wherein the first part syntax element being one indicating that the filter set from the APS is applied to the current block;

wherein the bitstream excludes the first part syntax element when the number is equal to zero, and wherein the first part syntax element is inferred to indicate that the fixed filter set is applied to the current block;

wherein whether to include the index of the filter set from the APS in the bitstream is based on the number;

wherein the index of the filter set from the APS is included in the bitstream when the number is greater than 1;

wherein the index of the filter set from the APS is excluded from the bitstream when the number is equal to 1;

wherein the current region is a slice;

wherein the index of the filter set from the APS is coded with a truncated binary method;

wherein a maximum value of the index of the filter set from the APS is set to a number of allowed ALF APSs for the current region minus K, and wherein K = 1; and

wherein all bins of a binarized bin string of the index of the filter set from the APS are bypass coded.

19. 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:

generating the bitstream for a current block of a current region of the video, wherein the generating comprises using an adaptive loop filter for the current block, and wherein the

bitstream is configured to indicate the adaptive loop filter using a two-part syntax element including:

a first part syntax element indicating whether a fixed filter set or a filter set from an adaptation parameter set (APS) is applied to the current block, and

a second part syntax element indicative of an index of the fixed filter set or the filter set from the APS,

wherein the bitstream comprises a third syntax element indicating a number of adaptive loop filter APSs used for the current region; and

wherein the first part syntax element is included in the bitstream in case that a value of the number is greater than zero.

20. The non-transitory computer-readable recording medium of claim 19, wherein the first part syntax element being zero indicating that the fixed filter set is applied to the current block;

wherein the first part syntax element being one indicating that the filter set from the APS is applied to the current block;

wherein the bitstream excludes the first part syntax element when the number is equal to zero, and wherein the first part syntax element is inferred to indicate that the fixed filter set is applied to the current block;

wherein whether to include the index of the filter set from the APS in the bitstream is based on the number;

wherein the index of the filter set from the APS is included in the bitstream when the number is greater than 1;

wherein the index of the filter set from the APS is excluded from the bitstream when the number is equal to 1;

wherein the current region is a slice;

wherein the index of the filter set from the APS is coded with a truncated binary method;

wherein a maximum value of the index of the filter set from the APS is set to a number of allowed ALF APSs for the current region minus K, and wherein K = 1; and

wherein all bins of a binarized bin string of the index of the filter set from the APS are bypass coded.