CLAIMS

1. A method of decoding an encoded video sequence, comprising:
obtaining a value of a reference picture list (RPL) syntax element from a bitstream of the video sequence, the RPL syntax element specifying whether syntax elements related to reference picture lists are present in the bitstream;
when the RPL syntax element specifies that the syntax elements related to reference picture lists are present in the bitstream: a) obtaining, from the bitstream, values of the syntax elements related to reference picture lists and b)
constructing at least one reference picture list for inter prediction using the obtained values of the syntax elements related to reference picture lists.

2. The method of claim 1, further comprising:
when the RPL syntax element specifies that the syntax elements related to reference picture lists are not present in the bitstream, constructing at least one reference picture list for inter prediction without further obtaining values of syntax elements from the bitstream.

3. The method of claim 2, wherein the constructing at least one reference picture list for inter prediction without further obtaining values of syntax elements from the bitstream comprises performing a sliding window method to construct at least one reference picture list for inter prediction.

4. The method of any one of claims 1 to 3, further comprising:
when the RPL syntax element specifies that the syntax elements related to reference picture lists are not present in the bitstream, obtaining, from the bitstream, a value of a second syntax element related to reference picture marking.

5. The method of any one of claims 1 to 4, wherein the syntax elements related to reference picture lists are first syntax elements related to reference picture lists constructing.

6. The method of claim 5, wherein the first syntax elements related to reference picture lists constructing are included in at least one reference picture list syntax structure, wherein each reference picture list syntax structure is used to construct one reference picture list.

7. The method of claim 4, wherein the second syntax element related to reference picture marking provides information on a maximum number of reference pictures usable for inter prediction of pictures of the video sequence.

8. The method of any of the preceding claims, wherein the RPL syntax element is a flag and a first value of the flag specifies that syntax related to reference picture lists is present in the bitstream and a second value of the flag different from the first value specifies that syntax related to reference picture lists is not present in the bitstream.

9. The method of claim 8, wherein the first value is 1 and the second value is 0.

10. The method of any of the preceding claims, wherein the value of the RPS syntax element is obtained from one of a sequence parameter set, picture parameter set and slice header.

11. The method of any of the preceding claims, wherein the syntax elements related to reference picture lists are obtained from a sequence parameter set and/or a slice header.

12. The method of any of the preceding claims, further comprising, when the RPL syntax element specifies that syntax related to reference picture lists is present in the bitstream, obtaining a value of at least one third syntax element from a slice header specifying whether the syntax elements related to reference picture lists are obtainable from a sequence parameter set or a slice header.

13. The method of claim 12, wherein the at least one third syntax element comprises two third syntax elements, wherein the value of one of the two third syntax elements is obtained for a first reference picture list and, in case that a fourth syntax element obtained from the bitstream indicates that another third syntax element is present in the bitstream, the value of the other one of the two third syntax elements is obtained for a second reference list.

14. The method of claim 13, wherein the fourth syntax element is another flag, a value of 1 of the other flag indicating that the other third syntax element is present in the bitstream.

15. The method of claim 12, 13 or 14, wherein the at least one value of the third syntax element is obtained in case that there is at least one reference picture list syntax structure signalled at sequence parameter set level in the bitstream, wherein each reference picture list syntax structure is used to construct one reference picture list.

16. A method of encoding a video sequence, comprising:

determining whether values of syntax elements related to reference picture lists are to be used for construction of at least one reference picture list for inter prediction;

generating a bitstream comprising a RPL syntax element specifying whether syntax elements related to reference picture lists are present in the bitstream, wherein the RPL syntax element specifies that the syntax elements related to reference picture lists are present in the bitstream in case that it is determined that the values of the syntax elements related to reference picture lists are to be used for construction of at least one reference picture list for inter prediction.

17. The method of claim 16, wherein the bitstream comprises a second syntax element related to reference picture marking, when it is determined that values of syntax elements related to reference picture lists are not to be used for construction of at least one reference picture list for inter prediction.

18. The method of claim 16 or 17, wherein the syntax elements related to reference picture lists are first syntax elements related to reference picture lists constructing.

19. The method of claim 18, wherein the first syntax elements related to reference picture lists constructing are included in at least one reference picture list syntax structure, wherein each reference picture list syntax structure is used for construction of one reference picture list.

20. The method of claim 17, wherein the second syntax element related to reference picture marking provides information on a maximum number of reference pictures usable for inter prediction of pictures of the video sequence

21. The method of any one of claims 16 to 20, wherein the RPL syntax element is a flag and a first value of the flag specifies that syntax related to reference picture lists is present in the

bitstream and a second value of the flag different from the first value specifies that syntax related to reference picture lists is not present in the bitstream.

22. The method of claim 21, wherein the first value is 1 and the second value is 0.

23. The method of any one of claims 16 to 22, wherein the RPL syntax element is signalled in one of a sequence parameter set, picture parameter set and slice header.

24. The method of any one of claims 16 to 23, wherein the syntax elements related to reference picture lists are comprised in a sequence parameter set and/or a slice header.

25. The method of any one of claims 16 to 24, wherein at least one third syntax element is comprised in a slice header specifying whether the syntax elements related to reference picture lists are obtainable from a sequence parameter set or a slice header, when it is determined that values of syntax elements related to reference picture lists are to be used for construction of at least one reference picture list for inter prediction.

26. The method of claim 25, wherein the bitstream comprises a fourth syntax element and the at least one third syntax element comprises two third syntax elements, wherein one of the two third syntax elements is for a first reference picture list and the other one of the two third syntax elements is for a second reference list in case that a value of the fourth syntax element indicates that the other third syntax element is present in the bitstream.

27. The method of claim 26, wherein the fourth syntax element is another flag, a value of 1 of the other flag indicating that the other third syntax element is present in the bitstream.

28. The method of any of claims 25 to 27, wherein at least one reference picture list syntax structure is signalled at sequence parameter set level in the bitstream, wherein each reference picture list syntax structure is used for construction of one reference picture list.

29. An encoder (20) comprising processing circuitry for carrying out the method according to any of claims 16 to 28.

30. A decoder (30) comprising processing circuitry for carrying out the method according to any of claims 1 to 15.

~~31. A computer program product comprising program code for performing the method according to any one of the claims 1 to 28 when executed on a computer or a processor.~~

~~32~~31. A decoder, comprising:

one or more processors; and

a non-transitory computer-readable storage medium coupled to the processors and storing programming for execution by the processors, wherein the programming, when executed by the processors, configures the decoder to carry out the method according to any one of the claims 1 to 15.

~~33~~32. An encoder, comprising:

one or more processors; and

a non-transitory computer-readable storage medium coupled to the processors and storing programming for execution by the processors, wherein the programming, when executed by the processors, configures the encoder to carry out the method according to any one of the claims 16 to 28.

~~34~~33. A non-transitory computer-readable medium carrying a program code which, when executed by a computer device, causes the computer device to perform the method of any one of the claims 1 to 28.

~~35. A decoding device (1000) for decoding an encoded video sequence, comprising:~~

~~an obtaining unit (1010) configured for obtaining a value of a reference picture list (RPL) syntax element from a bitstream of the video sequence, the RPL syntax element specifying whether syntax elements related to reference picture lists are present in the bitstream and,~~

~~when the RPL syntax element specifies that the syntax elements related to reference picture lists are present in the bitstream, obtaining, from the bitstream, values of the syntax elements related to reference picture lists; and~~

~~a RPL construction unit (1020) for, when the RPL syntax element specifies that the syntax elements related to reference picture lists are present in the bitstream, constructing at least one~~

reference picture list for inter prediction using the obtained values of the syntax elements related to reference picture lists.

36. The decoding device (1000) of claim 35, wherein the RPL construction unit (1020) is configured for, when the RPL syntax element specifies that the syntax elements related to reference picture lists are not present in the bitstream, constructing at least one reference picture list for inter prediction without further obtaining values of syntax elements from the bitstream.

37. The decoding device (1000) of claim 36, wherein the constructing at least one reference picture list for inter prediction without further obtaining values of syntax elements from the bitstream comprises performing a sliding window method to construct at least one reference picture list for inter prediction.

38. The decoding device (1000) of any one of claims 35 to 37, wherein the obtaining unit (1010) is configured for, when the RPL syntax element specifies that the syntax elements related to reference picture lists are not present in the bitstream, obtaining, from the bitstream, a value of a second syntax element related to reference picture marking.

39. The decoding device (1000) of any one of claims 35 to 38, wherein the syntax elements related to reference picture lists are first syntax elements related to reference picture lists constructing.

40. The decoding device (1000) of claim 39, wherein the first syntax elements related to reference picture lists constructing are included in at least one reference picture list syntax structure, and wherein the RPL construction unit (1020) is configured for using each reference picture list syntax structure to construct one reference picture list.

41. The decoding device (1000) of claim 38, wherein the second syntax element related to reference picture marking provides information on a maximum number of reference pictures usable for inter prediction of pictures of the video sequence.

42. The decoding device (1000) of any of the claims 35 to 41, wherein the RPL syntax element is a flag and a first value of the flag specifies that syntax related to reference picture lists

~~is present in the bitstream and a second value of the flag different from the first value specifies that syntax related to reference picture lists is not present in the bitstream.~~

~~43. The decoding device (1000) of claim 42, wherein the first value is 1 and the second value is 0.~~

~~44. The decoding device (1000) of any of claims 35 to 43, wherein the obtaining unit (1010) is configured for obtaining the value of the RPS syntax element from one of a sequence parameter set, picture parameter set and slice header.~~

~~45. The decoding device (1000) of any of the claims 35 to 44, wherein the obtaining unit (1010) is configured for obtaining the syntax elements related to reference picture lists from a sequence parameter set and/or a slice header.~~

~~46. The decoding device (1000) of any of claims 35 to 45, wherein the obtaining unit (1010) is configured for, when the RPL syntax element specifies that syntax related to reference picture lists is present in the bitstream, obtaining a value of at least one third syntax element from a slice header specifying whether the syntax elements related to reference picture lists are obtainable from a sequence parameter set or a slice header.~~

~~47. The decoding device (1000) of claim 46, wherein the at least one third syntax element comprises two third syntax elements, wherein the obtaining unit (1010) is configured for obtaining the value of one of the two third syntax elements for a first reference picture list and, in case that a fourth syntax element obtained from the bitstream indicates that another third syntax element is present in the bitstream, the value of the other one of the two third syntax elements for a second reference list.~~

~~48. The decoding device (1000) of claim 47, wherein the fourth syntax element is another flag, a value of 1 of the other flag indicating that the other third syntax element is present in the bitstream.~~

~~49. The decoding device (1000) of claim 46, 47 or 48, wherein the obtaining unit (1010) is configured for obtaining the at least one value of the third syntax element in case that there is at least one reference picture list syntax structure signalled at sequence parameter set level in~~

the bitstream, and wherein the RPL construction unit (1020) is configured for using each reference picture list syntax structure to construct one reference picture list.

50. An encoding device (1100) for encoding a video sequence, comprising:

a determining unit (1110) for determining whether values of syntax elements related to reference picture lists are to be used for construction of at least one reference picture list for inter prediction;

a bitstream generation unit (1120) configured for generating a bitstream comprising a RPL syntax element specifying whether syntax elements related to reference picture lists are present in the bitstream, wherein the RPL syntax element specifies that the syntax elements related to reference picture lists are present in the bitstream in case that it is determined by the determining unit (1110) that the values of the syntax elements related to reference picture lists are to be used for construction of at least one reference picture list for inter prediction.

51. The encoding device (1100) of claim 50, wherein the bitstream comprises a second syntax element related to reference picture marking, when it is determined by the determining unit (1110) that values of syntax elements related to reference picture lists are not to be used for construction of at least one reference picture list for inter prediction.

52. The encoding device (1100) of claim 50 or 51, wherein the syntax elements related to reference picture lists are first syntax elements related to reference picture lists constructing.

53. The encoding device (1100) of claim 52, wherein the first syntax elements related to reference picture lists constructing are included in at least one reference picture list syntax structure, wherein each reference picture list syntax structure is used for construction of one reference picture list.

54. The encoding device (1100) of claim 51, wherein the second syntax element related to reference picture marking provides information on a maximum number of reference pictures usable for inter prediction of pictures of the video sequence

55. The encoding device (1100) of any one of claims 50 to 54, wherein the RPL syntax element is a flag and a first value of the flag specifies that syntax related to reference picture lists is

present in the bitstream and a second value of the flag different from the first value specifies that syntax related to reference picture lists is not present in the bitstream.

56. The encoding device (1100) of claim 55, wherein the first value is 1 and the second value is 0.

57. The encoding device (1100) of any one of claims 50 to 56, wherein the RPL syntax element is comprised in one of a sequence parameter set, picture parameter set and slice header.

58. The encoding device (1100) of any one of claims 50 to 57, wherein the syntax elements related to reference picture lists are comprised in a sequence parameter set and/or a slice header.

59. The encoding device (1100) of any one of claims 50 to 58, wherein at least one third syntax element is comprised in a slice header specifying whether the syntax elements related to reference picture lists are obtainable from a sequence parameter set or a slice header, when it is determined by the determining unit (1110) that values of syntax elements related to reference picture lists are to be used for construction of at least one reference picture list for inter prediction.

60. The encoding device (1100) of claim 59, wherein the bitstream comprises a fourth syntax element and the at least one third syntax element comprises two third syntax elements, wherein one of the two third syntax elements is for a first reference picture list and the other one of the two third syntax elements is for a second reference list in case that a value of the fourth syntax element indicates that the other third syntax element is present in the bitstream.

61. The encoding device (1100) of claim 60, wherein the fourth syntax element is another flag, a value of 1 of the other flag indicating that the other third syntax element is present in the bitstream.

62. The encoding device (1100) of any of claims 59 to 61, wherein at least one reference picture list syntax structure is comprised in a sequence parameter set, wherein each reference picture list syntax structure is used for construction of one reference picture list.

~~63~~34. A non-transitory storage medium which includes a coded bitstream, the bitstream being generated by dividing a current picture of a video signal or an image signal a plurality of blocks, wherein the bitstream comprises a plurality of syntax elements, wherein the plurality of syntax elements comprises a RPL syntax element specifying whether syntax elements related to reference picture lists are present in the bitstream, the plurality of syntax elements further comprises the syntax elements related to reference picture lists when the RPL syntax element specifies that the syntax elements related to reference picture lists are present in the bitstream.