Amended Set of Claims 1 to 37

1. A method for coding video data, the method comprising:

coding syntax elements of a parameter set that identify candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in a reference picture set of a current picture, and one or more of the candidate long-term reference pictures do not belong in the reference picture set of the current picture, and wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

coding syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

constructing at least one of a plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the plurality of reference picture subsets form the reference picture set; and

inter-predicting the current picture based on one or more reference pictures of the plurality of reference picture subsets.

2. The method of claim 1, wherein coding the syntax elements that identify the candidate long-term reference pictures comprises coding the syntax elements in a sequence parameter set.

3. The method of claim 1, wherein coding the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture comprises coding the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture in a slice header of the current picture.

4. The method of claim 1, further comprising:

coding syntax elements that indicate long-term reference pictures that belong in the reference picture set, wherein the syntax elements that indicate the long-term reference pictures indicate the long-term reference pictures that are not included in the candidate long-term reference pictures,

wherein constructing the at least one of the plurality reference picture subsets comprises constructing the at least one of the plurality of reference picture subsets based on the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set and the syntax elements that indicate the long-term reference pictures that belong in the reference picture set.

5. The method of claim 4, wherein coding the syntax elements that indicate which long-term reference pictures belong in the reference picture set comprises coding the syntax elements that indicate which long-term reference pictures belong in the reference picture set in a slice header of the current picture.

6. The method of claim 1, wherein coding syntax elements that identify the candidate long-term reference pictures comprises:

coding a list of picture order count (POC) values for the candidate long-term reference pictures, the method further comprising:

coding an index value to the list.

7. The method of claim 6, wherein coding the list of POC values comprises coding the list of POC values in the parameter set, and wherein coding the index value to the list comprises coding the index value to the list in a slice header of the current picture.

8. The method of claim 1, wherein coding the syntax elements of the parameter set that identify the candidate long-term reference pictures comprises coding the syntax elements in a picture parameter set.

9. The method of claim 1,

wherein coding syntax elements of the parameter set comprises decoding, with a video decoder, the syntax elements from the parameter set that identify the candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order,

wherein coding syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture comprises decoding, with the video decoder, the syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture,

wherein constructing comprise constructing, with the video decoder, the at least one of the plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, and

wherein inter-predicting comprises inter-predicting, with the video decoder, the current picture based on one or more reference pictures of the plurality of reference picture subsets.

10. The method of claim 1,

wherein coding syntax elements of the parameter set comprises encoding, with a video encoder, the syntax elements in the parameter set that identify the candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order,

wherein coding syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture comprises encoding, with the video encoder, the syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture,

wherein constructing comprise constructing, with the video encoder, the at least one of the plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, and

wherein inter-predicting comprises inter-predicting, with the video encoder, the current picture based on one or more reference pictures of the plurality of reference picture subsets.

11. A device for coding video data, the device comprising a video coder configured to:

code syntax elements of a parameter set that identify candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in a reference picture set of a current picture, and one or more of the candidate long-term reference pictures do not belong in the reference picture set of the current picture, and wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

code syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

construct at least one of a plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the plurality of reference picture subsets form the reference picture set; and

inter-predict the current picture based on one or more reference pictures of the plurality of reference picture subsets.

12. The device of claim 11, wherein to code the syntax elements that identify the candidate long-term reference pictures, the video coder is configured to code the syntax elements in a sequence parameter set.

13. The device of claim 11, wherein to code the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture, the video coder is configured to code the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture in a slice header of the current picture.

14. The device of claim 11, wherein the video coder is configured to:

code syntax elements that indicate long-term reference pictures that belong in the reference picture set, wherein the syntax elements that indicate the long-term reference pictures indicate the long-term reference pictures that are not included in the candidate long-term reference pictures,

wherein to construct the at least one of the plurality reference picture subsets, the video coder is configured to construct the at least one of the plurality of reference picture subsets based on the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set and the syntax elements that indicate the long-term reference pictures that belong in the reference picture set.

15. The device of claim 14, wherein to code the syntax elements that indicate which long-term reference pictures belong in the reference picture set, the video coder is configured to code the syntax elements that indicate which long-term reference pictures belong in the reference picture set in a slice header of the current picture.

16. The device of claim 11, wherein to code syntax elements that identify the candidate long-term reference pictures, the video coder is configured to:

code a list of picture order count (POC) values for the candidate long-term reference pictures; and

code an index value to the list.

17. The device of claim 16, wherein to code the list of POC values, the video coder is configured to code the list of POC values in the parameter set, and wherein to code the index value to the list, the video coder is configured to code the index value to the list in a slice header of the current picture.

18. The device of claim 11, wherein to code the syntax elements of the parameter set that identify the candidate long-term reference pictures, the video coder is configured to code the syntax elements in a picture parameter set.

19. The device of claim 11, wherein the video coder comprises a video decoder, and wherein the video decoder is configured to:

decode the syntax elements from the parameter set that identify the candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

decode the syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

construct the at least one of the plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture; and

inter-predict the current picture based on the one or more pictures of the plurality of reference picture subsets.

20. The device of claim 11, wherein the video coder comprises a video encoder, and video encoder is configured to:

encode the syntax elements in the parameter set that identify the candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

encode the syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

construct the at least one of the plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture; and

inter-predict the current picture based on the one or more reference pictures of the plurality of reference picture subsets.

21. The device of claim 11, wherein the device comprises one of:

a wireless communication device;

a microprocessor; and

an integrated circuit.

22. A computer-readable storage medium having stored thereon instructions that, when executed, cause a processor of a device for coding video data to:

code syntax elements of a parameter set that identify candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in a reference picture set of a current picture, and one or more of the candidate long-term reference pictures do not belong in the reference picture set of the current picture, and wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

code syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

construct at least one of a plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the plurality of reference picture subsets form the reference picture set; and

inter-predict the current picture based on one or more reference pictures of the plurality of reference picture subsets.

23. The computer-readable storage medium of claim 22, wherein the instructions that cause the processor to code the syntax elements that identify the candidate long-term reference pictures comprise instructions that cause the processor to code the syntax elements in a sequence parameter set.

24. The computer-readable storage medium of claim 22, wherein the instructions that cause the processor to code the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture comprise instructions that cause the processor to code the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture in a slice header of the current picture.

25. The computer-readable storage medium of claim 22, further comprising instructions that cause the processor to:

code syntax elements that indicate long-term reference pictures that belong in the reference picture set, wherein the syntax elements that indicate the long-term reference pictures indicate the long-term reference pictures that are not included in the candidate long-term reference pictures,

wherein the instructions that cause the processor to construct the at least one of the plurality reference picture subsets comprise instructions that cause the at least one processor to construct the at least one of the plurality of reference picture subsets based on the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set and the syntax elements that indicate the long-term reference pictures that belong in the reference picture set.

26. The computer-readable storage medium of claim 25, wherein the instructions that cause the processor to code the syntax elements that indicate which long-term reference pictures belong in the reference picture set comprise instructions that cause the processor to code the syntax elements that indicate which long-term reference pictures belong in the reference picture set in a slice header of the current picture.

27. The computer-readable storage medium of claim 22, wherein the instructions that cause the processor to code syntax elements that identify the candidate long-term reference pictures comprise instructions that cause the processor to:

code a list of picture order count (POC) values for the candidate long-term reference pictures, the computer-readable storage medium further comprising instructions that cause the processor to:

code an index value to the list.

28. The computer-readable storage medium of claim 27, wherein the instructions that cause the processor to code the list of POC values comprise instructions that cause the processor to code the list of POC values in the parameter set, and wherein the instructions that cause the processor to code the index value to the list comprise instructions that cause the processor to code the index value to the list in a slice header of the current picture.

29. The computer-readable storage medium of claim 22, wherein the instructions that cause the processor to code the syntax elements of the parameter set that identify the candidate long-term reference pictures comprise instructions that cause the processor to code the syntax elements in a picture parameter set.

30. A device for coding video data, the device comprising:

means for coding syntax elements of a parameter set that identify candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in a reference picture set of a current picture and one or more of the candidate long-term reference pictures do not belong in the reference picture set of the current picture, and wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

means for coding syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

means for constructing at least one of a plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the plurality of reference picture subsets form the reference picture set; and

means for inter-predicting the current picture based on one or more reference pictures of the plurality of reference picture subsets.

31. The device of claim 30, wherein the means for coding the syntax elements that identify the candidate long-term reference pictures comprises means for coding the syntax elements in a sequence parameter set.

32. The device of claim 30, wherein the means for coding the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture comprises means for coding the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture in a slice header of the current picture.

33. The device of claim 30, further comprising:

means for coding syntax elements that indicate long-term reference pictures that belong in the reference picture set, wherein the syntax elements that indicate the long-term reference pictures indicate the long-term reference pictures that are not included in the candidate long-term reference pictures,

wherein the means for constructing the at least one of the plurality reference picture subsets comprises means for constructing the at least one of the plurality of reference picture subsets based on the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set and the syntax elements that indicate the long-term reference pictures that belong in the reference picture set.

34. The device of claim 33, wherein the means for coding the syntax elements that indicate which long-term reference pictures belong in the reference picture set comprises means for coding the syntax elements that indicate which long-term reference pictures belong in the reference picture set in a slice header of the current picture.

35. The device of claim 30, wherein the means for coding syntax elements that identify the candidate long-term reference pictures comprises:

means for coding a list of picture order count (POC) values for the candidate long-term reference pictures, the device further comprising:

means for coding an index value to the list.

36. The device of claim 35, wherein the means for coding the list of POC values comprises means for coding the list of POC values in the parameter set, and wherein the means for coding the index value to the list comprises means for coding the index value to the list in a slice header of the current picture.

37. The device of claim 30, wherein the means for coding the syntax elements of the parameter set that identify the candidate long-term reference pictures comprises means for coding the syntax elements in a picture parameter set.

Claims

1. A method for coding video data, the method comprising:

coding syntax elements of a parameter set that identify candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in a reference picture set of a current picture, and one or more of the candidate long-term reference pictures do not belong in the reference picture set of the current picture, and wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

coding syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

constructing at least one of a plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the plurality of reference picture subsets form the reference picture set; and

inter-predicting the current picture based on one or more reference pictures of the plurality of reference picture subsets.

2. The method of claim 1, wherein coding the syntax elements that identify the candidate long-term reference pictures comprises coding the syntax elements in a sequence parameter set.

3. The method of claim 1, wherein coding the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture comprises coding the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture in a slice header of the current picture.

4. The method of claim 1, further comprising:

coding syntax elements that indicate long-term reference pictures that belong in the reference picture set, wherein the syntax elements that indicate the long-term

reference pictures indicate the long-term reference pictures that are not included in the candidate long-term reference pictures,

wherein constructing the at least one of the plurality reference picture subsets comprises constructing the at least one of the plurality of reference picture subsets based on the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set and the syntax elements that indicate the long-term reference pictures that belong in the reference picture set.

5. The method of claim 4, wherein coding the syntax elements that indicate which long-term reference pictures belong in the reference picture set comprises coding the syntax elements that indicate which long-term reference pictures belong in the reference picture set in a slice header of the current picture.

6. The method of claim 1, wherein coding syntax elements that identify the candidate long-term reference pictures comprises:

coding a list of picture order count (POC) values for the candidate long-term reference pictures, the method further comprising:

coding an index value to the list.

7. The method of claim 6, wherein coding the list of POC values comprises coding the list of POC values in the parameter set, and wherein coding the index value to the list comprises coding the index value to the list in a slice header of the current picture.

8. The method of claim 1, wherein coding the syntax elements of the parameter set that identify the candidate long-term reference pictures comprises coding the syntax elements in a picture parameter set.

9. The method of claim 1,

wherein coding syntax elements of the parameter set comprises decoding, with a video decoder, the syntax elements from the parameter set that identify the candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting

the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order,

wherein coding syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture comprises decoding, with the video decoder, the syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture,

wherein constructing comprise constructing, with the video decoder, the at least one of the plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, and

wherein inter-predicting comprises inter-predicting, with the video decoder, the current picture based on one or more reference pictures of the plurality of reference picture subsets.

10. The method of claim 1,

wherein coding syntax elements of the parameter set comprises encoding, with a video encoder, the syntax elements in the parameter set that identify the candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order,

wherein coding syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture comprises encoding, with the video encoder, the syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture,

wherein constructing comprise constructing, with the video encoder, the at least one of the plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, and

wherein inter-predicting comprises inter-predicting, with the video encoder, the current picture based on one or more reference pictures of the plurality of reference picture subsets.

11. A device for coding video data, the device comprising a video coder configured to:

code syntax elements of a parameter set that identify candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in a reference picture set of a current picture, and one or more of the candidate long-term reference pictures do not belong in the reference picture set of the current picture, and wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

code syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

construct at least one of a plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the plurality of reference picture subsets form the reference picture set; and

inter-predict the current picture based on one or more reference pictures of the plurality of reference picture subsets.

12. The device of claim 11, wherein to code the syntax elements that identify the candidate long-term reference pictures, the video coder is configured to code the syntax elements in a sequence parameter set.

13. The device of claim 11, wherein to code the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture, the video coder is configured to code the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture in a slice header of the current picture.

14. The device of claim 11, wherein the video coder is configured to:

code syntax elements that indicate long-term reference pictures that belong in the reference picture set, wherein the syntax elements that indicate the long-term reference pictures indicate the long-term reference pictures that are not included in the candidate long-term reference pictures,

wherein to construct the at least one of the plurality reference picture subsets, the video coder is configured to construct the at least one of the plurality of reference picture subsets based on the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set and the syntax elements that indicate the long-term reference pictures that belong in the reference picture set.

15. The device of claim 14, wherein to code the syntax elements that indicate which long-term reference pictures belong in the reference picture set, the video coder is configured to code the syntax elements that indicate which long-term reference pictures belong in the reference picture set in a slice header of the current picture.

16. The device of claim 11, wherein to code syntax elements that identify the candidate long-term reference pictures, the video coder is configured to:

code a list of picture order count (POC) values for the candidate long-term reference pictures; and

code an index value to the list.

17. The device of claim 16, wherein to code the list of POC values, the video coder is configured to code the list of POC values in the parameter set, and wherein to code the index value to the list, the video coder is configured to code the index value to the list in a slice header of the current picture.

18. The device of claim 11, wherein to code the syntax elements of the parameter set that identify the candidate long-term reference pictures, the video coder is configured to code the syntax elements in a picture parameter set.

19. The device of claim 11, wherein the video coder comprises a video decoder, and wherein the video decoder is configured to:

decode the syntax elements from the parameter set that identify the candidate long-term reference pictures, wherein one or more of the candidate long-term reference

pictures belong in the reference picture set of the current picture, wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

decode the syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

construct the at least one of the plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture; and

inter-predict the current picture based on the one or more pictures of the plurality of reference picture subsets.

20. The device of claim 11, wherein the video coder comprises a video encoder, and video encoder is configured to:

encode the syntax elements in the parameter set that identify the candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

encode the syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

construct the at least one of the plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture; and

inter-predict the current picture based on the one or more reference pictures of the plurality of reference picture subsets.

21. The device of claim 11, wherein the device comprises one of:

a wireless communication device;

a microprocessor; and

an integrated circuit.

22. A computer-readable storage medium having stored thereon instructions that, when executed, cause a processor of a device for coding video data to:

code syntax elements of a parameter set that identify candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in a reference picture set of a current picture, and one or more of the candidate long-term reference pictures do not belong in the reference picture set of the current picture, and wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

code syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

construct at least one of a plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the plurality of reference picture subsets form the reference picture set; and

inter-predict the current picture based on one or more reference pictures of the plurality of reference picture subsets.

23. The computer-readable storage medium of claim 22, wherein the instructions that cause the processor to code the syntax elements that identify the candidate long-term reference pictures comprise instructions that cause the processor to code the syntax elements in a sequence parameter set.

24. The computer-readable storage medium of claim 22, wherein the instructions that cause the processor to code the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture comprise instructions that cause the processor to code the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture in a slice header of the current picture.

25. The computer-readable storage medium of claim 22, further comprising instructions that cause the processor to:

code syntax elements that indicate long-term reference pictures that belong in the reference picture set, wherein the syntax elements that indicate the long-term

reference pictures indicate the long-term reference pictures that are not included in the candidate long-term reference pictures,

wherein the instructions that cause the processor to construct the at least one of the plurality reference picture subsets comprise instructions that cause the at least one processor to construct the at least one of the plurality of reference picture subsets based on the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set and the syntax elements that indicate the long-term reference pictures that belong in the reference picture set.

26. The computer-readable storage medium of claim 25, wherein the instructions that cause the processor to code the syntax elements that indicate which long-term reference pictures belong in the reference picture set comprise instructions that cause the processor to code the syntax elements that indicate which long-term reference pictures belong in the reference picture set in a slice header of the current picture.

27. The computer-readable storage medium of claim 22, wherein the instructions that cause the processor to code syntax elements that identify the candidate long-term reference pictures comprise instructions that cause the processor to:

code a list of picture order count (POC) values for the candidate long-term reference pictures, the computer-readable storage medium further comprising instructions that cause the processor to:

code an index value to the list.

28. The computer-readable storage medium of claim 27, wherein the instructions that cause the processor to code the list of POC values comprise instructions that cause the processor to code the list of POC values in the parameter set, and wherein the instructions that cause the processor to code the index value to the list comprise instructions that cause the processor to code the index value to the list in a slice header of the current picture.

29. The computer-readable storage medium of claim 22, wherein the instructions that cause the processor to code the syntax elements of the parameter set that identify the candidate long-term reference pictures comprise instructions that cause the processor to code the syntax elements in a picture parameter set.

30. A device for coding video data, the device comprising:

means for coding syntax elements of a parameter set that identify candidate long-term reference pictures, wherein one or more of the candidate long-term reference pictures belong in a reference picture set of a current picture, and one or more of the candidate long-term reference pictures do not belong in the reference picture set of the current picture, and wherein the reference picture set identifies reference pictures that can potentially be used for inter-predicting the current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;

means for coding syntax elements that indicate which candidate long-term reference pictures, identified in the parameter set, belong in the reference picture set of the current picture;

means for constructing at least one of a plurality of reference picture subsets based on the indication of which candidate long-term reference pictures belong in the reference picture set of the current picture, wherein the plurality of reference picture subsets form the reference picture set; and

means for inter-predicting the current picture based on one or more reference pictures of the plurality of reference picture subsets.

31. The device of claim 30, wherein the means for coding the syntax elements that identify the candidate long-term reference pictures comprises means for coding the syntax elements in a sequence parameter set.

32. The device of claim 30, wherein the means for coding the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture comprises means for coding the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set of the current picture in a slice header of the current picture.

33. The device of claim 30, further comprising:

means for coding syntax elements that indicate long-term reference pictures that belong in the reference picture set, wherein the syntax elements that indicate the long-term reference pictures indicate the long-term reference pictures that are not included in the candidate long-term reference pictures.

wherein the means for constructing the at least one of the plurality reference picture subsets comprises means for constructing the at least one of the plurality of reference picture subsets based on the syntax elements that indicate which candidate long-term reference pictures belong in the reference picture set and the syntax elements that indicate the long-term reference pictures that belong in the reference picture set.

34. The device of claim 33, wherein the means for coding the syntax elements that indicate which long-term reference pictures belong in the reference picture set comprises means for coding the syntax elements that indicate which long-term reference pictures belong in the reference picture set in a slice header of the current picture.

35. The device of claim 30, wherein the means for coding syntax elements that identify the candidate long-term reference pictures comprises:

means for coding a list of picture order count (POC) values for the candidate long-term reference pictures, the device further comprising:

means for coding an index value to the list.

36. The device of claim 35, wherein the means for coding the list of POC values comprises means for coding the list of POC values in the parameter set, and wherein the means for coding the index value to the list comprises means for coding the index value to the list in a slice header of the current picture.

37. The device of claim 30, wherein the means for coding the syntax elements of the parameter set that identify the candidate long-term reference pictures comprises means for coding the syntax elements in a picture parameter set.