WHAT IS CLAIMED IS:

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

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

constructing a plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

adding reference pictures from a first subset of the plurality of reference picture subsets, followed by reference pictures from a second subset of the plurality of reference picture subsets, and followed by reference pictures from a third subset of the plurality of reference picture subsets into a reference picture list as long as a number of reference picture list entries is not greater than a maximum number of allowable reference list entries; and

coding the current picture based on the reference picture list.

2. The method of claim 1, wherein adding the reference pictures comprises:

adding the reference pictures from the first reference picture subset in the reference picture list until all reference pictures in the first reference picture subset are added in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries;

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the first reference picture subset, adding the reference pictures from the second reference picture subset in the reference picture list until all reference pictures in the second reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries; and

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the second reference picture subset, adding the reference pictures from the third reference picture subset in the reference picture list until all reference pictures in the third reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

3. The method of claim 2, further comprising:

coding a first syntax element that indicates a number of reference pictures in the first reference picture subset; and

coding a second syntax element that indicates a number of reference pictures in the second reference picture subset;

coding a third syntax element that indicates a number of long-term reference pictures whose identification information is included in a picture parameter set (PPS), wherein the long-term reference pictures 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 a fourth syntax element that indicates a number of the long-term reference pictures whose identification information is not included in the PPS; and

determining a number of reference pictures in the third reference picture subset based on third syntax element and the fourth syntax element,

wherein adding the reference pictures from the first reference picture subset in the reference picture list comprises adding the reference pictures from the first reference picture subset until a number of reference pictures added from the first reference picture list equals a value of the first syntax element or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries,

wherein adding the reference pictures from the second reference picture subset in the reference picture list comprises adding the reference pictures from the second reference picture subset until a number of reference pictures added from the second reference picture list equals a value of the second syntax element or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries, and

wherein adding the reference pictures from the third reference picture subset in the reference picture list comprises adding the reference pictures from the third reference picture subset until a number of reference pictures added from the third reference picture subset equals the determined number of reference pictures in the third reference picture set or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

4. The method of claim 3, wherein the first syntax element comprises a num_short_term_curr0 syntax element, the second syntax element comprises a num_short_term_curr1 syntax element, the third syntax element comprises a num_long_term_pps_curr syntax element, and the fourth syntax element comprises a num_long_term_add_curr syntax element.

5. The method of claim 1, wherein the reference picture list comprises a first reference picture list, the number of reference picture list entries comprises a number of entries in the first reference picture list, and the maximum number of allowable reference list entries comprises a maximum number of allowable entries in the first reference picture list, the method further comprising:

adding the reference pictures from the second subset of the plurality of reference picture subsets, followed by the reference pictures from the first subset of the plurality of reference picture subsets, and followed by the reference pictures from the third subset of the plurality of reference picture subsets into a second reference picture list as long as a number of entries in the second reference picture list is not greater than a maximum number of allowable entries in the second reference picture list,

wherein coding the current picture comprises coding the current picture based on the first reference picture list and the second reference picture list.

6. The method of claim 5, wherein the first reference picture subset identifies short-term reference pictures that are prior to the current picture in decoding order and prior to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

7. The method of claim 5, wherein the second reference picture subset identifies short-term reference pictures that are prior to the current picture in decoding order and subsequent to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

8. The method of claim 5, wherein the third reference picture subset identifies long-term reference pictures that are prior to the current picture in decoding order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

9. The method of claim 1,

wherein coding information comprises decoding information, with a video decoder, of reference pictures that belong to the reference picture set,

wherein constructing comprises constructing, with the video decoder, the plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

wherein adding comprises adding, with the video decoder, reference pictures from the first subset of the plurality of reference picture subsets, followed by reference pictures from the second subset of the plurality of reference picture subsets, and followed by reference pictures from the third subset of the plurality of reference picture subsets into the reference picture list as long as the number of reference picture list entries is not greater than the maximum number of allowable reference list entries; and

wherein coding comprises, decoding, with the video decoder, the current picture based on the reference picture list.

10. The method of claim 1,

wherein coding information comprises encoding information, with a video encoder, of reference pictures that belong to the reference picture set,

wherein constructing comprises constructing, with the video encoder, the plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

wherein adding comprises adding, with the video encoder, reference pictures from the first subset of the plurality of reference picture subsets, followed by reference pictures from the second subset of the plurality of reference picture subsets, and followed by reference pictures from the third subset of the plurality of reference picture subsets into the reference picture list as long as the number of reference picture list entries is not greater than the maximum number of allowable reference list entries; and

wherein coding comprises, encoding, with the video encoder, the current picture based on the reference picture list.

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

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

construct a plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

add reference pictures from a first subset of the plurality of reference picture subsets, followed by reference pictures from a second subset of the plurality of reference picture subsets, and followed by reference pictures from a third subset of the plurality of reference picture subsets into a reference picture list as long as a number of reference picture list entries is not greater than a maximum number of allowable reference list entries; and

code the current picture based on the reference picture list.

12. The device of claim 11, wherein to add the reference pictures, the video coder is configured to:

add the reference pictures from the first reference picture subset in the reference picture list until all reference pictures in the first reference picture subset are added in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries;

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the first reference picture subset, add the reference pictures from the second reference picture subset in the reference picture list until all reference pictures in the second reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries; and

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the second reference picture subset, add the reference pictures from the third reference picture subset in the reference picture list until all reference pictures in the third reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

13. The device of claim 12, wherein the video coder is configured to:

code a first syntax element that indicates a number of reference pictures in the first reference picture subset; and

code a second syntax element that indicates a number of reference pictures in the second reference picture subset;

code a third syntax element that indicates a number of long-term reference pictures whose identification information is included in a picture parameter set (PPS), wherein the long-term reference pictures 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 a fourth syntax element that indicates a number of the long-term reference pictures whose identification information is not included in the PPS; and

determine a number of reference pictures in the third reference picture subset based on third syntax element and the fourth syntax element,

wherein to add the reference pictures from the first reference picture subset in the reference picture list, the video coder is configured to add the reference pictures from the first reference picture subset until a number of reference pictures added from the first reference picture list equals a value of the first syntax element or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries,

wherein to add the reference pictures from the second reference picture subset in the reference picture list, the video coder is configured to add the reference pictures from the second reference picture subset until a number of reference pictures added from the second reference picture list equals a value of the second syntax element or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries, and

wherein to add the reference pictures from the third reference picture subset in the reference picture list, the video coder is configured to add the reference pictures from the third reference picture subset until a number of reference pictures added from the third reference picture subset equals the determined number of reference pictures in the third reference picture set or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

14. The device of claim 13, wherein the first syntax element comprises a num_short_term_curr0 syntax element, the second syntax element comprises a num_short_term_curr1 syntax element, the third syntax element comprises a num_long_term_pps_curr syntax element, and the fourth syntax element comprises a num_long_term_add_curr syntax element.

15. The device of claim 11,

wherein the reference picture list comprises a first reference picture list, the number of reference picture list entries comprises a number of entries in the first reference picture list, and the maximum number of allowable reference list entries comprises a maximum number of allowable entries in the first reference picture list,

wherein the video coder is configured to:

add the reference pictures from the second subset of the plurality of reference picture subsets, followed by the reference pictures from the first subset of the plurality of reference picture subsets, and followed by the reference pictures from the third subset of the plurality of reference picture subsets into a second reference picture list as long as a number of entries in the second reference picture list is not greater than a maximum number of allowable entries in the second reference picture list, and

wherein to code the current picture, the video coder is configured to code the current picture based on the first reference picture list and the second reference picture list.

16. The device of claim 15, wherein the first reference picture subset identifies short-term reference pictures that are prior to the current picture in decoding order and prior to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

17. The device of claim 15, wherein the second reference picture subset identifies short-term reference pictures that are prior to the current picture in decoding order and subsequent to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

18. The device of claim 15, wherein the third reference picture subset identifies long-term reference pictures that are prior to the current picture in decoding order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

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

decode information of reference pictures that belong to the reference picture set,

construct the plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

adding reference pictures from the first subset of the plurality of reference picture subsets, followed by reference pictures from the second subset of the plurality of reference picture subsets, and followed by reference pictures from the third subset of the plurality of reference picture subsets into the reference picture list as long as the number of reference picture list entries is not greater than the maximum number of allowable reference list entries; and

decode the current picture based on the reference picture list.

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

encode information of reference pictures that belong to the reference picture set,

construct the plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

add reference pictures from the first subset of the plurality of reference picture subsets, followed by reference pictures from the second subset of the plurality of reference picture subsets, and followed by reference pictures from the third subset of the plurality of reference picture subsets into the reference picture list as long as the number of reference picture list entries is not greater than the maximum number of allowable reference list entries; and

encode the current picture based on the reference picture list.

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

construct a plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

add reference pictures from a first subset of the plurality of reference picture subsets, followed by reference pictures from a second subset of the plurality of reference picture subsets, and followed by reference pictures from a third subset of the plurality of reference picture subsets into a reference picture list as long as a number of reference picture list entries is not greater than a maximum number of allowable reference list entries; and

code the current picture based on the reference picture list.

23. The computer-readable storage medium of claim 22, wherein the instructions that cause the processor to add the reference pictures comprise instructions that cause the processor to:

add the reference pictures from the first reference picture subset in the reference picture list until all reference pictures in the first reference picture subset are added in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries;

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the first reference picture subset, add the reference pictures from the second reference picture subset in the reference picture list until all reference pictures in the second reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries; and

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the second reference picture subset, add the reference pictures from the third reference picture subset in the reference picture list until all reference pictures in the third reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

24. The computer-readable storage medium of claim 22,

wherein the reference picture list comprises a first reference picture list, the number of reference picture list entries comprises a number of entries in the first reference picture list, and the maximum number of allowable reference list entries comprises a maximum number of allowable entries in the first reference picture list,

wherein the instructions further cause the processor to:

add the reference pictures from the second subset of the plurality of reference picture subsets, followed by the reference pictures from the first subset of the plurality of reference picture subsets, and followed by the reference pictures from the third subset of the plurality of reference picture subsets into a second reference picture list as long as a number of entries in the second reference picture list is not greater than a maximum number of allowable entries in the second reference picture list, and

wherein the instructions that cause the processor to code the current picture comprise instructions that cause the processor to code the current picture based on the first reference picture list and the second reference picture list.

25. The computer-readable storage medium of claim 24, wherein the first reference picture subset identifies short-term reference pictures that are prior to the current picture in decoding order and prior to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

26. The computer-readable storage medium of claim 24, wherein the second reference picture subset identifies short-term reference pictures that are prior to the current picture in decoding order and subsequent to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

27. The computer-readable storage medium of claim 24, wherein the third reference picture subset identifies long-term reference pictures that are prior to the current picture in decoding order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

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

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

means for constructing a plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

means for adding reference pictures from a first subset of the plurality of reference picture subsets, followed by reference pictures from a second subset of the plurality of reference picture subsets, and followed by reference pictures from a third subset of the plurality of reference picture subsets into a reference picture list as long as a number of reference picture list entries is not greater than a maximum number of allowable reference list entries; and

means for coding the current picture based on the reference picture list.

29. The device of claim 28, wherein the means for adding the reference pictures comprises:

means for adding the reference pictures from the first reference picture subset in the reference picture list until all reference pictures in the first reference picture subset are added in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries;

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the first reference picture subset, means for adding the reference pictures from the second reference picture subset in the reference picture list until all reference pictures in the second reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries; and

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the second reference picture subset, means for adding the reference pictures from the third reference picture subset in the reference picture list until all reference pictures in the third reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

30. The device of claim 28, wherein the reference picture list comprises a first reference picture list, the number of reference picture list entries comprises a number of entries in the first reference picture list, and the maximum number of allowable reference list entries comprises a maximum number of allowable entries in the first reference picture list, the device further comprising:

means for adding the reference pictures from the second subset of the plurality of reference picture subsets, followed by the reference pictures from the first subset of the plurality of reference picture subsets, and followed by the reference pictures from the third subset of the plurality of reference picture subsets into a second reference picture list as long as a number of entries in the second reference picture list is not greater than a maximum number of allowable entries in the second reference picture list,

wherein the means for coding the current picture comprises means for coding the current picture based on the first reference picture list and the second reference picture list.

31. The device of claim 30, wherein the first reference picture subset identifies short-term reference pictures that are prior to the current picture in decoding order and prior to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

32. The device of claim 30, wherein the second reference picture subset identifies short-term reference pictures that are prior to the current picture in decoding order and subsequent to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

33. The device of claim 30, wherein the third reference picture subset identifies long-term reference pictures that are prior to the current picture in decoding order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order.

CLAIMS

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

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

constructing a plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set, wherein the plurality of reference picture subsets includes:

a first reference picture subset that identifies short-term reference pictures that are prior to the current picture in decoding order and prior to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes short-term reference pictures that are prior to the current picture in output order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order;

a second reference picture subset that identifies short-term reference pictures that are prior to the current picture in decoding order and subsequent to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes short-term

reference pictures that are subsequent to the current picture in output order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order; and

a third reference picture subset that identifies long-term reference pictures that are prior to the current picture in decoding order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes long-term reference pictures that are prior to the current picture in decoding order, that cannot be used for inter-predicting the current picture, and that can be used inter-predicting one or more pictures following the current picture in decoding order;

adding reference pictures from the first reference picture subset of the plurality of reference picture subsets, followed by reference pictures from the second reference picture subset of the plurality of reference picture subsets, and followed by reference pictures from the third reference picture subset of the plurality of reference picture subsets into a reference picture list as long as a number of reference picture list entries is not greater than a maximum number of allowable reference picture list entries; and

coding the current picture based on the reference picture list.

2. The method of claim **1**, wherein adding the reference pictures comprises:

adding the reference pictures from the first reference picture subset in the reference picture list until all reference pictures in the first reference picture subset are added in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries;

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the first reference picture subset, adding the reference pictures from the second reference picture subset in the reference picture list until all reference pictures in the second reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries; and

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the second reference picture subset, adding the reference pictures from the third reference picture subset in the reference picture list until all reference pictures in the third reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

3. The method of claim **2**, further comprising:

coding a first syntax element that indicates a number of reference pictures in the first reference picture subset; and

coding a second syntax element that indicates a number of reference pictures in the second reference picture subset;

coding a third syntax element that indicates a number of long-term reference pictures whose identification information is included in a picture parameter set (PPS), wherein the long-term reference pictures 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 a fourth syntax element that indicates a number of the long-term reference pictures whose identification information is not included in the PPS; and

determining a number of reference pictures in the third reference picture subset based on third syntax element and the fourth syntax element,

wherein adding the reference pictures from the first reference picture subset in the reference picture list comprises adding the reference pictures from the first reference picture subset until a number of reference pictures added from the first reference picture list equals a value of the first syntax element or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries,

wherein adding the reference pictures from the second reference picture subset in the reference picture list comprises adding the reference pictures from the second reference picture subset until a number of reference pictures added from the second reference picture list equals a value of the second syntax element or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries, and

wherein adding the reference pictures from the third reference picture subset in the reference picture list comprises adding the reference pictures from the third reference picture subset until a number of reference pictures added from the third reference picture subset equals the determined number of reference pictures in the third reference picture set or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

4. The method of claim **1**, wherein the reference picture list comprises a first reference picture list, the number of reference picture list entries comprises a number of entries in the first reference picture list, and the maximum number of allowable reference picture list entries comprises a maximum number of allowable entries in the first reference picture list, the method further comprising:

adding the reference pictures from the second reference picture subset of the plurality of reference picture subsets, followed by the reference pictures from the first reference picture subset of the plurality of reference picture subsets, and followed by the reference pictures from the third reference picture subset of the plurality of reference picture subsets into a second reference picture list as long as a number of entries in the second reference picture list is not greater than a maximum number of allowable entries in the second reference picture list,

wherein coding the current picture comprises coding the current picture based on the first reference picture list and the second reference picture list.

5. The method of claim **1**,

wherein coding information comprises decoding information of reference pictures that belong to the reference picture set, and

wherein coding comprises decoding the current picture based on the reference picture list.

6. The method of claim **1**,

wherein coding information comprises encoding information of reference pictures that belong to the reference picture set, and

wherein coding comprises encoding the current picture based on the reference picture list.

7. A device for coding video data, the device comprising:
a memory configured to store reference pictures; and
a video coder configured to:
code information indicative of the reference pictures that belong to a reference picture set, wherein the reference picture set identifies the reference pictures that can potentially be used for inter-predicting a current picture and can potentially be used for inter-predicting one or more pictures following the current picture in decoding order;
construct a plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set, wherein the plurality of reference picture subsets includes:
a first reference picture subset that identifies short-term reference pictures that are prior to the current picture in decoding order and prior to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes short-term reference pictures that are prior to the current picture in output order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order;
a second reference picture subset that identifies short-term reference pictures that are prior to the current picture in decoding order and subsequent to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes short-term reference pictures that are subsequent to the current picture in output order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order; and

a third reference picture subset that identifies long-term reference pictures that are prior to the current picture in decoding order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes long-term reference pictures that are prior to the current picture in decoding order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order;

add reference pictures from the first reference picture subset of the plurality of reference picture subsets, followed by reference pictures from the second reference picture subset of the plurality of reference picture subsets, and followed by reference pictures from the third reference picture subset of the plurality of reference picture subsets into a reference picture list as long as a number of reference picture list entries is not greater than a maximum number of allowable reference picture list entries; and

code the current picture based on the reference picture list.

8. The device of claim **7**, wherein to add the reference pictures, the video coder is configured to:

add the reference pictures from the first reference picture subset in the reference picture list until all reference pictures in the first reference picture subset are added in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries;

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the first reference picture subset, add the reference pictures from the second reference picture subset in the reference picture list until all reference pictures in the second reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries; and

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the second reference picture subset, add the reference pictures from the third reference picture subset in the reference picture list until all reference pictures in the third reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

9. The device of claim **8**, wherein the video coder is configured to:

code a first syntax element that indicates a number of reference pictures in the first reference picture subset; and

code a second syntax element that indicates a number of reference pictures in the second reference picture subset;

code a third syntax element that indicates a number of long-term reference pictures whose identification information is included in a picture parameter set (PPS), wherein the long-term reference pictures 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 a fourth syntax element that indicates a number of the long-term reference pictures whose identification information is not included in the PPS; and

determine a number of reference pictures in the third reference picture subset based on third syntax element and the fourth syntax element,

wherein to add the reference pictures from the first reference picture subset in the reference picture list, the video coder is configured to add the reference pictures from the first reference picture subset until a number of reference pictures added from the first reference picture list equals a value of the first syntax element or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries,

wherein to add the reference pictures from the second reference picture subset in the reference picture list, the video coder is configured to add the reference pictures from the second reference picture subset until a number of reference pictures added from the second reference picture list equals a value of the second syntax element or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries, and

wherein to add the reference pictures from the third reference picture subset in the reference picture list, the video coder is configured to add the reference pictures from the third reference picture subset until a number of reference pictures added from the third reference picture subset equals the determined number of reference pictures in the third reference picture set or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

10. The device of claim **7**,

wherein the reference picture list comprises a first reference picture list, the number of reference picture list entries comprises a number of entries in the first reference picture list, and the maximum number of allowable reference picture list entries comprises a maximum number of allowable entries in the first reference picture list,

wherein the video coder is configured to:

add the reference pictures from the second reference picture subset of the plurality of reference picture subsets, followed by the reference pictures from the first reference picture subset of the plurality of reference picture subsets, and followed by the reference pictures from the third reference picture subset of the plurality of reference picture subsets into a second reference picture list as long as a number of entries in the second reference picture list is not greater than a maximum number of allowable entries in the second reference picture list, and

wherein to code the current picture, the video coder is configured to code the current picture based on the first reference picture list and the second reference picture list.

11. The device of claim **7**, wherein the video coder comprises a video decoder, and wherein the video decoder is configured to:

decode information of reference pictures that belong to the reference picture set,

construct the plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

adding reference pictures from the first reference picture subset of the plurality of reference picture subsets, followed by reference pictures from the second reference picture subset of the plurality of reference picture subsets, and followed by reference pictures from the third reference picture subset of the plurality of reference picture subsets into the reference picture list as long as the number of reference picture list entries is not greater than the maximum number of allowable reference picture list entries; and

decode the current picture based on the reference picture list.

12. The device of claim **11**, further comprising a display configured to display the decoded current picture and one or more of the reference pictures.

13. The device of claim **7**, wherein the video coder comprises a video encoder, and wherein the video encoder is configured to:

encode information of reference pictures that belong to the reference picture set,

construct the plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set;

add reference pictures from the first reference picture subset of the plurality of reference picture subsets, followed by reference pictures from the second reference picture subset of the plurality of reference picture subsets, and followed by reference pictures from the third reference picture subset of the plurality of reference picture subsets into the reference picture list as long as the number of reference picture list entries is not greater than the maximum number of allowable reference picture list entries; and

encode the current picture based on the reference picture list.

14. The device of claim **13**, further comprising a camera configured to capture the current picture that is encoded and the reference pictures.

15. The device of claim **7**, wherein the device comprises one or more of:

a wireless communication device comprising at least one of a display to display the current picture or a camera to capture the current picture;

a microprocessor; or

an integrated circuit.

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

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

construct a plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set, wherein the plurality of reference picture subsets includes:

a first reference picture subset that identifies short-term reference pictures that are prior to the current picture in decoding order and prior to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes short-term reference pictures that are prior to the current picture in output order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order;

a second reference picture subset that identifies short-term reference pictures that are prior to the current picture in decoding order and subsequent to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes short-term reference pictures that are subsequent to the current picture in output order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order; and

a third reference picture subset that identifies long-term reference pictures that are prior to the current picture in decoding order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes long-term reference pictures that are prior to the current picture in decoding order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order;

add reference pictures from the first reference picture subset of the plurality of reference picture subsets, followed by reference pictures from the second reference picture subset of the plurality of reference picture subsets, and followed by reference pictures from the third reference picture subset of the plurality of reference picture subsets into a reference picture list as long as a number of reference picture list entries is not greater than a maximum number of allowable reference picture list entries; and

code the current picture based on the reference picture list.

17. The non-transitory computer-readable storage medium of claim **16**, wherein the instructions that cause the processor to add the reference pictures comprise instructions that cause the processor to:

add the reference pictures from the first reference picture subset in the reference picture list until all reference pictures in the first reference picture subset are added in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries;

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the first reference picture subset, add the reference pictures from the second reference picture subset in the reference picture list until all reference pictures in the second reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries; and

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the second reference picture subset, add the reference pictures from the third reference picture subset in the reference picture list until all reference pictures in the third reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

18. The non-transitory computer-readable storage medium of claim **16**,

wherein the reference picture list comprises a first reference picture list, the number of reference picture list entries comprises a number of entries in the first reference picture list, and the maximum number of allowable reference picture list entries comprises a maximum number of allowable entries in the first reference picture list,

wherein the instructions further cause the processor to:

add the reference pictures from the second reference picture subset of the plurality of reference picture subsets, followed by the reference pictures from the first reference picture subset of the plurality of reference picture subsets, and followed by the reference pictures from the third reference picture subset of the plurality of reference picture subsets into a second reference picture list as long as a number of entries in the second reference picture list is not greater than a maximum number of allowable entries in the second reference picture list, and

wherein the instructions that cause the processor to code the current picture comprise instructions that cause the processor to code the current picture based on the first reference picture list and the second reference picture list.

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

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

means for constructing a plurality of reference picture subsets that each identifies zero or more of the reference pictures of the reference picture set, wherein the plurality of reference picture subsets includes:

a first reference picture subset that identifies short-term reference pictures that are prior to the current picture in decoding order and prior to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the

one or more pictures following the current picture in decoding order, and excludes short-term reference pictures that are prior to the current picture in output order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order;

a second reference picture subset that identifies short-term reference pictures that are prior to the current picture in decoding order and subsequent to the current picture in output order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes short-term reference pictures that are subsequent to the current picture in output order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order; and

a third reference picture subset that identifies long-term reference pictures that are prior to the current picture in decoding order and that can potentially be used for inter-predicting the current picture and one or more of the one or more pictures following the current picture in decoding order, and excludes long-term reference pictures that are prior to the current picture in decoding order, that cannot be used for inter-predicting the current picture, and that can be used for inter-predicting one or more pictures following the current picture in decoding order;

means for adding reference pictures from the first reference picture subset of the plurality of reference picture sub-

sets, followed by reference pictures from the second reference picture subset of the plurality of reference picture subsets, and followed by reference pictures from the third reference picture subset of the plurality of reference picture subsets into a reference picture list as long as a number of reference picture list entries is not greater than a maximum number of allowable reference picture list entries; and

means for coding the current picture based on the reference picture list.

20. The device of claim **19**, wherein the means for adding the reference pictures comprises:

means for adding the reference pictures from the first reference picture subset in the reference picture list until all reference pictures in the first reference picture subset are added in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries;

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the first reference picture subset, means for adding the reference pictures from the second reference picture subset in the reference picture list until all reference pictures in the second reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries; and

when the number of reference picture list entries is less than the maximum number of allowable reference picture list entries, and after adding the reference pictures from the second reference picture subset, means for adding the reference pictures from the third reference picture subset in the reference picture list until all reference pictures in the third reference picture subset are identified in the reference picture list or the number of reference picture list entries is equal to the maximum number of allowable reference picture list entries.

21. The device of claim **19**, wherein the reference picture list comprises a first reference picture list, the number of reference picture list entries comprises a number of entries in the first reference picture list, and the maximum number of allowable reference picture list entries comprises a maximum number of allowable entries in the first reference picture list, the device further comprising:

means for adding the reference pictures from the second reference picture subset of the plurality of reference picture subsets, followed by the reference pictures from the first reference picture subset of the plurality of reference picture subsets, and followed by the reference pictures from the third reference picture subset of the plurality of reference picture subsets into a second reference picture list as long as a number of entries in the second reference picture list is not greater than a maximum number of allowable entries in the second reference picture list,

wherein the means for coding the current picture comprises means for coding the current picture based on the first reference picture list and the second reference picture list.