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Clean Version

49

Amended Set of Claims 1 to 45

1. A method of coding video data, the method comprising:
determining a set of spatial candidates associated with a current portion of a current video frame, wherein the set of spatial candidates corresponds to neighboring portions of the current video frame adjacent to the current portion and wherein each of the spatial candidates has associated motion information;
determining a temporal candidate associated with the current portion of the current video frame, wherein the temporal candidate corresponds to a portion of a reference video frame and wherein the temporal candidate has associated motion information;
generating a list of candidates based on a subset of the set of spatial candidates and the temporal candidate; and,
in response to the candidate list comprising less than a specified number of candidates, adding an artificially generated candidate to the list of candidates, wherein the artificially generated candidate is one of a non-scaled bi-predictive candidate, a zero candidate, and a motion vector offset candidate, and wherein adding the artificially generated candidate to the list of candidates comprises adding the artificially generated candidate without performing one or more pruning operations on the artificially generated candidate such that the candidate list may include an artificially generated candidate that comprises a duplicate candidate that has motion information that is the same as motion information of a spatial candidate of the subset or the same as motion information of the temporal candidate.
2. The method of claim 1, wherein the set of spatial candidates comprises two or more spatial candidates that have the same motion information, and wherein the subset of spatial candidates includes only one of the two or more spatial candidates.
3. The method of claim 1, wherein generating the list of candidates based on the subset of the set of spatial candidates and the temporal candidate comprises performing

120470WO

Clean Version

50

a pruning operation to exclude a candidate with duplicate motion information from the list of candidates.

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8. The method of claim 1, further comprising:
generating a second artificially generated candidate, wherein the artificially generated candidate and the second artificially generated candidate are generated in parallel.

9. The method of claim 1, further comprising:
coding the current portion of the current video frame using a merge mode, wherein motion information for the merge mode is determined based on the candidate list.

10. The method of claim 1, wherein the method is performed by a video encoder, wherein the method further comprises selecting a candidate from the candidate list and generating a syntax element indicating an index of the selected candidate.

11. The method of claim 1, wherein the method is performed by a video decoder, and wherein the method further comprises receiving a syntax element identifying a candidate from the candidate list and decoding the current portion of the current video frame using motion information of the identified candidate.

12. A device for coding video data, the device comprising:
a video coder configured to determine a set of spatial candidates associated with a current portion of a current video frame, wherein the set of spatial candidates corresponds to neighboring portions of the current video frame adjacent to the

120470WO

Clean Version

51

current portion and wherein each of the spatial candidates has associated motion information; determine a temporal candidate associated with the current portion of the current video frame, wherein the temporal candidate corresponds to a portion of a reference video frame and wherein the temporal candidate has associated motion information; generate a list of candidates based on a subset of the set of spatial candidates and the temporal candidate; and, in response to the candidate list comprising less than a specified number of candidates, adding an artificially generated candidate to the list of candidates, wherein the artificially generated candidate is one of a non-scaled bi-predictive candidate, a zero candidate, and a motion vector offset candidate, and wherein adding the artificially generated candidate to the list of candidates comprises adding the artificially generated candidate without performing one or more pruning operations on the artificially generated candidate such that such that the candidate list may include an artificially generated candidate that comprises a duplicate candidate that has motion information that is the same as motion information of a spatial candidate of the subset or the same as motion information of the temporal candidate.

13. The device of claim 12, wherein the set of spatial candidates comprises two or more spatial candidates that have the same motion information, and wherein the subset of spatial candidates includes only one of the two or more spatial candidates.

14. The device of claim 12, wherein the video coder generates the list of candidates based on the subset of the set of spatial candidates and the temporal candidate by performing a pruning operation to exclude a candidate with duplicate motion information from the list of candidates.

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120470WO

52

Clean Version

19. The device of claim 12, wherein the video coder is further configured to generate a second artificially generated candidate, wherein the artificially generated candidate and the second artificially generated candidate are generated in parallel.

20. The device of claim 12, wherein the video coder is further configured to code the current portion of the current video frame using a merge mode, wherein motion information for the merge mode is determined based on the candidate list.

21. The device of claim 12, wherein the video coder is a video encoder and wherein the video encoder is configured to select a candidate from the candidate list and generate a syntax element indicating an index of the selected candidate.

22. The device of claim 12, wherein the video coder is a video decoder, and wherein the video decoder is configured to receive a syntax element identifying a candidate from the candidate list and decode the current portion of the current video frame using motion information of the identified candidate.

23. The device of claim 12, wherein the device comprises at least one of:
an integrated circuit;
a microprocessor; and,
a wireless communication device that includes the video coder.

24. A device for coding video data, the device comprising:
means for determining a set of spatial candidates associated with a current portion of a current video frame, wherein the set of spatial candidates corresponds to neighboring portions of the current video frame adjacent to the current portion and wherein each of the spatial candidates has associated motion information;
means for determining a temporal candidate associated with the current portion of the current video frame, wherein the temporal candidate corresponds to a portion of a reference video frame and wherein the temporal candidate has associated motion information;
means for generating a list of candidates based on a subset of the set of spatial

120470WO

Clean Version

53

candidates and the temporal candidate; and
means for adding an artificially generated candidate to the list of candidates in response to the candidate list comprising less than a specified number of candidates, wherein the artificially generated candidate is one of a non-scaled bi-predictive candidate, a zero candidate, and a motion vector offset candidate, and wherein the means for adding the artificially generated candidate to the list of candidates comprises means for adding the artificially generated candidate without performing one or more pruning operations on the artificially generated candidate such that the candidate list may include an artificially generated candidate that comprises a duplicate candidate that has motion information that is the same as motion information of a spatial candidate of the subset or the same as motion information of the temporal candidate.

25. The device of claim 24, wherein the set of spatial candidates comprises two or more spatial candidates that have the same motion information, and wherein the subset of spatial candidates includes only one of the two or more spatial candidates.

26. The device of claim 24, wherein the means for generating the list of candidates based on the subset of the set of spatial candidates and the temporal candidate comprises means for performing a pruning operation to exclude a candidate with duplicate motion information from the list of candidates.

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31. The device of claim 24, further comprising:
means for generating a second artificially generated candidate, wherein the artificially generated candidate and the second artificially generated candidate are

120470WO

54

Clean Version

generated in parallel.

32. The device of claim 24, further comprising:

means for coding the current portion of the current video frame using a merge mode, wherein motion information for the merge mode is determined based on the candidate list.

33. The device of claim 24, wherein the device comprises a video encoder, and wherein the device further comprises means for selecting a candidate from the candidate list and means for generating an syntax element indicating an index of the selected candidate.

34. The device of claim 24, wherein the device comprises a video decoder, and wherein the device further comprises means for receiving a syntax element identifying a candidate from the candidate list and means for decoding the current portion of the current video frame using motion information of the identified candidate.

35. A computer-readable storage medium storing instructions that when executed cause one or more processors to:

determine a set of spatial candidates associated with a current portion of a current video frame, wherein the set of spatial candidates corresponds to neighboring portions of the current video frame adjacent to the current portion and wherein each of the spatial candidates has associated motion information;

determine a temporal candidate associated with the current portion of the current video frame, wherein the temporal candidate corresponds to a portion of a reference video frame and wherein the temporal candidate has associated motion information;

generate a list of candidates based on a subset of the set of spatial candidates and the temporal candidate; and,

add an artificially generated candidate to the list of candidates in response to the candidate list comprising less than a specified number of candidates, wherein the artificially generated candidate is one of a non-scaled bi-predictive candidate, a zero candidate, and a motion vector offset

120470WO

Clean Version

55

candidate, and wherein adding the artificially generated candidate to the list of candidates comprises adding the artificially generated candidate without performing one or more pruning operations on the artificially generated candidate such that the candidate list may include an artificially generated candidate that comprises a duplicate candidate that has motion information that is the same as motion information of a spatial candidate of the subset or the same as motion information of the temporal candidate.

36. The computer-readable storage medium of claim 35, wherein the set of spatial candidates comprises two or more spatial candidates that have the same motion information, and wherein the subset of spatial candidates includes only one of the two or more spatial candidates.

37. The computer-readable storage medium of claim 35, wherein the instructions cause the one or more processors to generate the list of candidates based on the subset of the set of spatial candidates and the temporal candidate by performing a pruning operation to exclude a candidate with duplicate motion information from the list of candidates.

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42. The computer-readable storage medium of claim 35, storing further instructions that when executed cause the one more processors to:
generate a second artificially generated candidate, wherein the artificially generated candidate and the second artificially generated candidate are generated in parallel.

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120470WO

Clean Version

56

43. The computer-readable storage medium of claim 35, storing further instructions that when executed cause the one more processors to:

code the current portion of the current video frame using a merge mode, wherein motion information for the merge mode is determined based on the candidate list.

44. The computer-readable storage medium of claim 35, wherein the one or more processors comprise a video encoder; wherein the computer-readable storage medium stores further instructions that when executed cause the one more processors to select a candidate from the candidate list and generate a syntax element indicating an index of the selected candidate.

45. The computer-readable storage medium of claim 35, wherein the one or more processors comprise a video decoder, wherein the computer-readable storage medium stores further instructions that when executed cause the one more processors to receive a syntax element identifying a candidate from the candidate list and decode the current portion of the current video frame using motion information of the identified candidate.

Claims

1. A method of coding video data, the method including:
 - determining a set of spatial candidates associated with a current portion of a current video frame, wherein the set of spatial candidates corresponds to neighboring portions of the current video frame adjacent to the current portion and wherein each of the spatial candidates has associated motion information;
 - determining a temporal candidate associated with the current portion of the current video frame, wherein the temporal candidate corresponds to a portion of a reference video frame and wherein the temporal candidate has associated motion information;
 - generating a list of candidates based on a subset of the set of spatial candidates and the temporal candidate; and,
 - in response to the candidate list including less than a specified number of candidates, adding an artificially generated candidate to the list of candidates, wherein the artificially generated candidate is one of a zero candidate or a motion vector offset candidate, and wherein adding the artificially generated candidate to the list of candidates includes adding the artificially generated candidate without performing one or more pruning operations on the artificially generated candidate such that the candidate list may include an artificially generated candidate that includes a duplicate candidate that has motion information that is the same as motion information of a spatial candidate of the subset or the same as motion information of the temporal candidate.
2. The method of claim 1, wherein the set of spatial candidates includes two or more spatial candidates that have the same motion information, and wherein the subset of spatial candidates includes only one of the two or more spatial candidates.
3. The method of claim 1, wherein generating the list of candidates based on the subset of the set of spatial candidates and the temporal candidate includes performing a pruning operation to exclude a candidate with duplicate motion information from the list of candidates.

4. The method of claim 1, further including:
generating a second artificially generated candidate, wherein the artificially generated candidate and the second artificially generated candidate are generated in parallel.
5. The method of claim 1, further including:
coding the current portion of the current video frame using a merge mode, wherein motion information for the merge mode is determined based on the candidate list.
6. The method of claim 1, wherein the method is performed by a video encoder, wherein the method further includes selecting a candidate from the candidate list and generating a syntax element indicating an index of the selected candidate.
7. The method of claim 1, wherein the method is performed by a video decoder, and wherein the method further includes receiving a syntax element identifying a candidate from the candidate list and decoding the current portion of the current video frame using motion information of the identified candidate.
8. A device for coding video data, the device including:
a memory configured to store the video data; and
a video coder configured to:
determine a set of spatial candidates associated with a current portion of a current video frame, wherein the set of spatial candidates corresponds to neighboring portions of the current video frame adjacent to the current portion and wherein each of the spatial candidates has associated motion information;
determine a temporal candidate associated with the current portion of the current video frame, wherein the temporal candidate corresponds to a portion of a reference video frame and wherein the temporal candidate has associated motion information; generate a list of candidates based on a subset of the set of spatial candidates and the temporal candidate; and
in response to the candidate list including less than a specified number of

candidates, adding an artificially generated candidate to the list of candidates, wherein the artificially generated candidate is one of a zero candidate or a motion vector offset candidate, and wherein adding the artificially generated candidate to the list of candidates includes adding the artificially generated candidate without performing one or more pruning operations on the artificially generated candidate such that the candidate list may include an artificially generated candidate that includes a duplicate candidate that has motion information that is the same as motion information of a spatial candidate of the subset or the same as motion information of the temporal candidate.

9. The device of claim 8, wherein the set of spatial candidates includes two or more spatial candidates that have the same motion information, and wherein the subset of spatial candidates includes only one of the two or more spatial candidates.
10. The device of claim 8, wherein the video coder generates the list of candidates based on the subset of the set of spatial candidates and the temporal candidate by performing a pruning operation to exclude a candidate with duplicate motion information from the list of candidates.
11. The device of claim 8, wherein the video coder is further configured to generate a second artificially generated candidate, wherein the artificially generated candidate and the second artificially generated candidate are generated in parallel.
12. The device of claim 8, wherein the video coder is further configured to code the current portion of the current video frame using a merge mode, wherein motion information for the merge mode is determined based on the candidate list.
13. The device of claim 8, wherein the video coder is a video encoder and wherein the video encoder is configured to select a candidate from the candidate list and generate a syntax element indicating an index of the selected candidate.
14. The device of claim 8, wherein the video coder is a video decoder, and wherein the video decoder is configured to receive a syntax element identifying a candidate from

the candidate list and decode the current portion of the current video frame using motion information of the identified candidate.

15. The device of claim 8, wherein the device includes at least one of:
 - an integrated circuit;
 - a microprocessor; and,
 - a wireless communication device that includes the video coder.
16. A device for coding video data, the device including:
 - means for determining a set of spatial candidates associated with a current portion of a current video frame, wherein the set of spatial candidates corresponds to neighboring portions of the current video frame adjacent to the current portion and wherein each of the spatial candidates has associated motion information;
 - means for determining a temporal candidate associated with the current portion of the current video frame, wherein the temporal candidate corresponds to a portion of a reference video frame and wherein the temporal candidate has associated motion information;
 - means for generating a list of candidates based on a subset of the set of spatial candidates and the temporal candidate; and
 - means for adding an artificially generated candidate to the list of candidates in response to the candidate list including less than a specified number of candidates, wherein the artificially generated candidate is one of a zero candidate or a motion vector offset candidate, and wherein the means for adding the artificially generated candidate to the list of candidates includes means for adding the artificially generated candidate without performing one or more pruning operations on the artificially generated candidate such that the candidate list may include an artificially generated candidate that includes a duplicate candidate that has motion information that is the same as motion information of a spatial candidate of the subset or the same as motion information of the temporal candidate.

17. The device of claim 16, wherein the set of spatial candidates includes two or more spatial candidates that have the same motion information, and wherein the subset of spatial candidates includes only one of the two or more spatial candidates.
18. The device of claim 16, wherein the means for generating the list of candidates based on the subset of the set of spatial candidates and the temporal candidate includes means for performing a pruning operation to exclude a candidate with duplicate motion information from the list of candidates.
19. The device of claim 16, further including:
means for generating a second artificially generated candidate, wherein the artificially generated candidate and the second artificially generated candidate are generated in parallel.
20. The device of claim 16, further including:
means for coding the current portion of the current video frame using a merge mode, wherein motion information for the merge mode is determined based on the candidate list.
21. The device of claim 16, wherein the device includes a video encoder, and wherein the device further includes means for selecting a candidate from the candidate list and means for generating an syntax element indicating an index of the selected candidate.
22. The device of claim 16, wherein the device includes a video decoder, and wherein the device further includes means for receiving a syntax element identifying a candidate from the candidate list and means for decoding the current portion of the current video frame using motion information of the identified candidate.
23. A computer-readable storage medium storing instructions that when executed cause one or more processors to perform a method according to any one of claims 1 to 7.