~~CLAIMS~~

~~WHAT IS CLAIMED IS:~~

CLAIMS

1. ~~—~~ A method of processing video data, the method comprising:

~~—~~ obtaining one or more blocks of video data;

populating a history-based motion vector predictor (HMVP) table with two or more HMVP candidates, wherein a first entry of the HMVP table associated with a first index value comprises a first HMVP candidate ~~and~~including motion information decoded at a first time, and wherein a second entry of the HMVP table associated with a second index value comprises a second HMVP candidate including motion information decoded at a second time, the first index value being ~~lower~~different than the second index value~~;~~

and the first time being different than the second time; selecting, for an advanced motion vector prediction (AMVP) candidate list~~, one or more~~ and without performing subsampling of entries of the HMVP table, a first set of HMVP candidates from the HMVP table in a reverse order from consecutive entries of the HMVP table associated with consecutive index values, wherein the second HMVP candidate is selected before the first HMVP candidate according to the reverse order; ~~and~~

adding the ~~selected one or more~~first set of HMVP candidates to the AMVP candidate list, the AMVP candidate list being used to perform AMVP for the one or more blocks~~.~~

~~2. The method of claim 1, wherein the first HMVP candidate comprises motion information decoded at a first time and the second HMVP candidate comprises motion information decoded at a second time, wherein the first time is later in time than the second time.~~

~~3. The method of claim 1, wherein the selecting the one or more HMVP candidates from the HMVP table in the reverse order comprises selecting the one or more HMVP candidates from consecutive entries of the HMVP table associated with consecutive index values, without performing subsampling of the entries of the HMVP table during the selection.~~

~~4. The method of claim 1 further comprising:~~

~~selecting, for a merge candidate list, one or more~~; selecting, for a merge candidate list, a second set of HMVP candidates from the HMVP table in a forward order, wherein the first

HMVP candidate is selected before the second HMVP candidate according to the forward order; and

~~———~~ adding the ~~selected one or more~~second set of HMVP candidates to the merge candidate list after adding a temporal motion vector predictor (TMVP) candidate to the merge candidate list, the merge candidate list being used to perform merge prediction for the one or more blocks.

~~5.~~ 2. The method of claim ~~4~~1, wherein the selecting the ~~one or more~~second set of HMVP candidates from the HMVP table in the forward order comprises subsampling of entries of the HMVP table using a subsampling rate, wherein a separation based on the subsampling rate is maintained between index values associated with entries of the HMVP table from which consecutive HMVP candidates are selected.

~~6. The method of claim 4, wherein adding the selected one or more HMVP candidates to the merge candidate list comprises adding the selected one or more HMVP candidates to the merge candidate list after adding a temporal motion vector predictor (TMVP) candidate to the merge candidate list.~~

~~7.~~ 3. The method of claim 1, wherein the two or more HMVP candidates comprise motion information for both prediction directions of bi-direction prediction.

~~8.~~ 4. The method of claim 1, wherein at least two HMVP tables are used in ~~the~~an AMVP mode with bi-prediction.

~~9.~~ 5. The method of claim ~~8~~4, wherein a first HMVP table is used for a first reference picture list, and wherein a second HMVP table is used for a second reference picture list.

~~10.~~ 6. The method of claim 1, wherein the AMVP includes an intra-block copy AMVP prediction mode.

~~11.~~ 7. The method of claim 1, wherein the method is performed by a decoder, and wherein the video data is obtained from an encoded video bitstream.

~~12.~~ 8. The method of claim 1, wherein the method is performed by an encoder.

~~13.~~ 9. An apparatus for processing video data, the apparatus comprising:

~~———~~ a memory; and

~~———~~ a processor implemented in circuitry and configured to:

~~———~~ obtain one or more blocks of video data;

~~———~~populate a history-based motion vector predictor (HMVP) table with two or more HMVP candidates, wherein a first entry of the HMVP table associated with a first index value comprises a first HMVP candidate ~~and~~including motion information decoded at a first time, and wherein a second entry of the HMVP table associated with a second index value comprises a second HMVP candidate including motion information decoded at a second time, the first index value being ~~lower~~different than the second index value~~;~~

~~———~~ and the first time being different than the second time; select, for an advanced motion vector prediction (AMVP) candidate list~~, one or more~~ and without performing subsampling of entries of the HMVP table, a first set of HMVP candidates from the HMVP table in a reverse order from consecutive entries of the HMVP table associated with consecutive index values, wherein the second HMVP candidate is selected before the first HMVP candidate according to the reverse order; ~~and~~

~~———~~add the ~~selected one or more~~first set of HMVP candidates to the AMVP candidate list, the AMVP candidate list being used to perform AMVP for the one or more blocks~~.~~

~~14. The apparatus of claim 13, wherein the first HMVP candidate comprises motion information decoded at a first time and the second HMVP candidate comprises motion information decoded at a second time, wherein the first time is later in time than the second time.~~

~~15. The apparatus of claim 13, wherein the selecting the one or more HMVP candidates from the HMVP table in the reverse order comprises selecting the one or more HMVP candidates from consecutive entries of the HMVP table associated with consecutive index values, without performing subsampling of the entries of the HMVP table during the selection.~~

~~16. The apparatus of claim 13, wherein the processor is further configured to:~~

———; select, for a merge candidate list, ~~one or more~~a second set of HMVP candidates from the HMVP table in a forward order, wherein the first HMVP candidate is selected before the second HMVP candidate according to the forward order; and

——— add the ~~selected one or more~~second set of HMVP candidates to the merge candidate list after adding a temporal motion vector predictor (TMVP) candidate to the merge candidate list, the merge candidate list being used to perform merge prediction for the one or more blocks.

~~17.~~ 10. The apparatus of claim ~~16~~9, wherein the selecting the ~~one or more~~second set of HMVP candidates from the HMVP table in the forward order comprises subsampling of entries of the HMVP table using a subsampling rate, wherein a separation based on the subsampling rate is maintained between index values associated with entries of the HMVP table from which consecutive HMVP candidates are selected.

~~18. The apparatus of claim 16, wherein adding the selected one or more HMVP candidates to the merge candidate list comprises adding the selected one or more HMVP candidates to the merge candidate list after adding a temporal motion vector predictor (TMVP) candidate to the merge candidate list.~~

~~19.~~ 11. The apparatus of claim ~~13~~9, wherein the two or more HMVP candidates comprise motion information for both prediction directions of bi-direction prediction.

~~20.~~ 12. The apparatus of claim ~~13~~9, wherein at least two HMVP tables are used in ~~the~~an AMVP mode with bi-prediction.

~~21.~~ 13. The apparatus of claim ~~20~~12, wherein a first HMVP table is used for a first reference picture list, and wherein a second HMVP table is used for a second reference picture list.

~~22.~~ 14. The apparatus of claim ~~13~~9, wherein the AMVP includes an intra-block copy AMVP prediction mode.

~~23.~~ 15. The apparatus of claim ~~13~~9, wherein the apparatus comprises a decoder, and wherein the video data is obtained from an encoded video bitstream.

~~24.~~ 16. The apparatus of claim ~~13~~9, wherein the apparatus comprises an encoder.

~~25.~~ 17. A non-transitory computer-readable medium having stored thereon instructions that, when executed by one or more processors, cause the one or more processors to:

obtain one or more blocks of video data;

populate a history-based motion vector predictor (HMVP) table with two or more HMVP candidates, wherein a first entry of the HMVP table associated with a first index value comprises a first HMVP candidate ~~and~~including motion information decoded at a first time, and wherein a second entry of the HMVP table associated with a second index value comprises a second HMVP candidate including motion information decoded at a second time, the first index value being ~~lower~~different than the second index value~~;~~

and the first time being different than the second time; select, for an advanced motion vector prediction (AMVP) candidate list~~, one or more~~ and without performing subsampling of entries of the HMVP table, a first set of HMVP candidates from the HMVP table in a reverse order from consecutive entries of the HMVP table associated with consecutive index values, wherein the second HMVP candidate is selected before the first HMVP candidate according to the reverse order; ~~and~~

add the ~~selected one or more~~first set of HMVP candidates to the AMVP candidate list, the AMVP candidate list being used to perform AMVP for the one or more blocks~~.~~

~~26. The non-transitory computer-readable medium of claim 25, wherein the first HMVP candidate comprises motion information decoded at a first time and the second HMVP candidate comprises motion information decoded at a second time, wherein the first time is later in time than the second time.~~

~~27. The non-transitory computer-readable medium of claim 25, wherein the selecting the one or more HMVP candidates from the HMVP table in the reverse order comprises selecting the one or more HMVP candidates from consecutive entries of the HMVP table associated with consecutive index values, without performing subsampling of the entries of the HMVP table during the selection.~~

~~28. The non-transitory computer-readable medium of claim 25, having stored thereon further instructions that, when executed by one or more processors, cause the one or more processors to:~~

———; select, for a merge candidate list, ~~one or more~~a second set of HMVP candidates from the HMVP table in a forward order, wherein the first HMVP candidate is selected before the second HMVP candidate according to the forward order; and

——— add the ~~selected one or more~~second set of HMVP candidates to the merge candidate list after adding a temporal motion vector predictor (TMVP) candidate to the merge candidate list, the merge candidate list being used to perform merge prediction for the one or more blocks.

18. The non-transitory computer-readable medium of claim 17, wherein the selecting the second set of HMVP candidates from the HMVP table in the forward order comprises subsampling of entries of the HMVP table using a subsampling rate, wherein a separation based on the subsampling rate is maintained between index values associated with entries of the HMVP table from which consecutive HMVP candidates are selected.

19. The non-transitory computer-readable medium of claim 17, wherein the two or more HMVP candidates comprise motion information for both prediction directions of bi-direction prediction.

20. The non-transitory computer-readable medium of claim 17, wherein at least two HMVP tables are used in an AMVP mode with bi-prediction.

21. The non-transitory computer-readable medium of claim 20, wherein a first HMVP table is used for a first reference picture list, and wherein a second HMVP table is used for a second reference picture list.

22. The non-transitory computer-readable medium of claim 17, wherein the AMVP includes an intra-block copy AMVP prediction mode.

~~29.~~ 23. An apparatus for processing video data, the apparatus comprising:

——— means for obtaining one or more blocks of video data;

means for populating a history-based motion vector predictor (HMVP) table with two or more HMVP candidates, wherein a first entry of the HMVP table associated with a first index value comprises a first HMVP candidate ~~and~~including motion information decoded at a first time, and wherein a second entry of the HMVP table associated with a second index value comprises a second HMVP candidate~~, the first index value being lower than the second index value;~~ including motion information decoded at a second time, the first index value being different than the second index value and the first time being different than the second time; means for selecting, for an advanced motion vector prediction (AMVP) candidate list and without performing subsampling of entries of the HMVP table, a first set of HMVP candidates from the HMVP table in a reverse order from consecutive entries of the HMVP table associated with consecutive index values, wherein the second HMVP candidate is selected before the first HMVP candidate according to the reverse order; means for adding the first set of HMVP candidates to the AMVP candidate list, the AMVP candidate list being used to perform AMVP for the one or more blocks; means for selecting, for a merge candidate list, a second set of HMVP candidates from the HMVP table in a forward order, wherein the first HMVP candidate is selected before the second HMVP candidate according to the forward order; and means for adding the second set of HMVP candidates to the merge candidate list after adding a temporal motion vector predictor (TMVP) candidate to the merge

candidate list, the merge candidate list being used to perform merge prediction for the one or more blocks.

~~means for selecting, for an advanced motion vector prediction (AMVP) candidate list, one or more HMVP candidates from the HMVP table in a reverse order, wherein the second HMVP candidate is selected before the first HMVP candidate according to the reverse order; and~~

~~means for adding the selected one or more HMVP candidates to the AMVP candidate list, the AMVP candidate list being used to perform AMVP for the one or more blocks.~~

~~30. The apparatus of claim 29, wherein the first HMVP candidate comprises~~ 24. The apparatus of claim 23, wherein the selecting the second set of HMVP candidates from the HMVP table in the forward order comprises subsampling of entries of the HMVP table using a subsampling rate, wherein a separation based on the subsampling rate is maintained between index values associated with entries of the HMVP table from which consecutive HMVP candidates are selected.

25. The apparatus of claim 23, wherein the two or more HMVP candidates comprise motion information ~~decoded~~for both prediction directions of bi-direction prediction.

26. The apparatus of claim 23, wherein at ~~a first time and the~~least two HMVP tables are used in an AMVP mode with bi-prediction.

27. The apparatus of claim 26, wherein a first HMVP table is used for a first reference picture list, and wherein a second HMVP ~~candidate comprises motion information decoded at a~~ table is used for a second ~~time, wherein the first time is later in time than the second time~~reference picture list.

28. The apparatus of claim 23, wherein the AMVP includes an intra-block copy AMVP prediction mode.