WHAT IS CLAIMED:

1. A computer-implemented method for video coding, comprising:

determining, via a video coder, a reference prediction motion vector in a reference layer of video data; and

determining, via the video coder, a target prediction motion vector in a target layer based at least in part on the reference prediction motion vector via cross-layer motion vector prediction, wherein the target layer is a higher layer than the reference layer.

2. The method of claim 1, wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer.

3. The method of claim 1, wherein the reference prediction motion vector may comprise a cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, or a coded cross-layer later temporal neighbor in display order.

4. The method of claim 1, further comprising:

determining, via the video coder, a further reference prediction motion vector for the reference layer of the video data.

5. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, and

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector.

6. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data,

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order.

7. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order,

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors.

8. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determining, via the video coder, one or more in-layer reference prediction motion vectors for the target layer of the video data;

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector, and

wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order.

9. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determining, via the video coder, one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filtering, via the video coder, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter; and

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more filtered reference prediction motion vectors.

10. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determining, via the video coder, one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

selecting, via the video coder, an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, and the one or more in-layer reference prediction motion vectors; and

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

11. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors,

wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer;

determining, via the video coder, one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filtering, via the video coder, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter;

selecting, via the video coder, an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, the scaled motion vectors, and the one or more filtered reference prediction motion vectors; and

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

12. A system for video coding on a computer, comprising:

a display device configured to present video data;

one or more processors communicatively coupled to the display device;

one or more memory stores communicatively coupled to the one or more processors;

a cross-layer prediction logic module of a video coder communicatively coupled to the one or more processors and configured to:

determine a reference prediction motion vector in a reference layer of video data, and

determine a target prediction motion vector in a target layer based at least in part on the reference prediction motion vector via cross-layer motion vector prediction, wherein the target layer is a higher layer than the reference layer.

13. The system of claim 12, wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer.

14. The system of claim 12, wherein the reference prediction motion vector may comprise a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, or a coded cross-layer later temporal neighbor in display order.

15. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data,

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order.

16. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor,

a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order,

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors.

17. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filter the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more filtered reference prediction motion vectors.

18. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a code cross-layer spatial neighbor, a code cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

select an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, and the one or more in-layer reference prediction motion vectors; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

19. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors,

wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filter the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter;

select an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, the scaled motion vectors, and the one or more filtered reference prediction motion vectors; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

20. At least one machine readable medium comprising:

a plurality of instructions that in response to being executed on a computing device, causes the computing device to perform the method according to any one of claims 1-11.

21. An apparatus, comprising:

means for performing the methods according to any one of claims 1-11.

22. A system comprising:

an antenna configured to receive an encoded bitstream of video data; and

a video decoder communicatively coupled to the antenna and configured to decode the encoded bitstream, wherein the video decoder is configured to:

determine a reference prediction motion vector in a reference layer of video data, and

determine a target prediction motion vector in a target layer based at least in part on the reference prediction motion vector via cross-layer motion vector prediction, wherein the target layer is a higher layer than the reference layer.

23. The system of claim 22, wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer.

24. The system of claim 22, wherein the reference prediction motion vector may comprise a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, or a coded cross-layer later temporal neighbor in display order.

25. The system of claim 22, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data,

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order.

26. The system of claim 22, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order,

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors.

27. The system of claim 22, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor,

a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filter the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more filtered reference prediction motion vectors.

28. The system of claim 22, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

select an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, and the one or more in-layer reference prediction motion vectors; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

29. The system of claim 22, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors,

wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filter the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or

more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter;

select an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, the scaled motion vectors, and the one or more filtered reference prediction motion vectors; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

CLAIMS

1. A computer-implemented method for video coding, comprising:

determining, via a video coder, a reference prediction motion vector in a reference layer of video data; and

determining, via the video coder, a target prediction motion vector in a target layer based at least in part on the reference prediction motion vector via cross-layer motion vector prediction, wherein the target layer is a higher layer than the reference layer.

2. The method of claim 1, wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer.

3. The method of claim 1, wherein the reference prediction motion vector may comprise a cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, or a coded cross-layer later temporal neighbor in display order.

4. The method of claim 1, further comprising:

determining, via the video coder, a further reference prediction motion vector for the reference layer of the video data.

5. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, and

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector.

6. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data,

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order.

7. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a cross-layer spatial neighbor, a coded cross-layer earlier temporal

neighbor in display order, and a coded cross-layer later temporal neighbor in display order,

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors.

8. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determining, via the video coder, one or more in-layer reference prediction motion vectors for the target layer of the video data;

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector, and

wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order.

9. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determining, via the video coder, one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filtering, via the video coder, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter; and

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the one or more filtered reference prediction motion vectors.

10. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determining, via the video coder, one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

selecting, via the video coder, an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, and the one or more in-layer reference prediction motion vectors; and

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

11. The method of claim 1, further comprising:

determining, via the video coder, one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors,

wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer;

determining, via the video coder, one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filtering, via the video coder, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction

motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter;

selecting, via the video coder, an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, the scaled motion vectors, and the one or more filtered reference prediction motion vectors; and

wherein the determination, via the video coder, of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

12. A system for video coding on a computer, comprising:

a display device configured to present video data;

one or more processors communicatively coupled to the display device;

one or more memory stores communicatively coupled to the one or more processors;

a cross-layer prediction logic module of a video coder communicatively coupled to the one or more processors and configured to:

determine a reference prediction motion vector in a reference layer of video data, and

determine a target prediction motion vector in a target layer based at least in part on the reference prediction motion vector via cross-layer motion vector prediction, wherein the target layer is a higher layer than the reference layer.

13. The system of claim 12, wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer.

14. The system of claim 12, wherein the reference prediction motion vector may comprise a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, or a coded cross-layer later temporal neighbor in display order.

15. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data,

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order.

16. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order,

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors.

17. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion

vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filter the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more filtered reference prediction motion vectors.

18. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a code cross-layer spatial neighbor, a code cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer

earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

select an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, and the one or more in-layer reference prediction motion vectors; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

19. The system of claim 12, wherein the cross-layer prediction logic is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors,

wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filter the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter;

select an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, the scaled motion vectors, and the one or more filtered reference prediction motion vectors; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

20. A system comprising:

an antenna configured to receive an encoded bitstream of video data; and

a video decoder communicatively coupled to the antenna and configured to decode the encoded bitstream, wherein the video decoder is configured to:

determine a reference prediction motion vector in a reference layer of video data, and

determine a target prediction motion vector in a target layer based at least in part on the reference prediction motion vector via cross-layer motion vector prediction, wherein the target layer is a higher layer than the reference layer.

21. The system of claim 20, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data,

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order.

22. The system of claim 20, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order,

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more further reference prediction motion vectors and/or the reference prediction motion vector, and

wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors.

23. The system of claim 20, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filter the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the one or more filtered reference prediction motion vectors.

24. The system of claim 20, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

select an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, and the one or more in-layer reference prediction motion vectors; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.

25. The system of claim 20, wherein the video decoder is further configured to:

determine one or more further reference prediction motion vectors for the reference layer of the video data, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise two or more of a coded cross-layer spatial neighbor, a coded cross-layer earlier temporal neighbor in display order, and a coded cross-layer later temporal neighbor in display order, wherein the one or more further reference prediction motion vectors and the reference prediction motion vector comprise scaled motion vectors,

wherein when the reference layer comprises a base layer, the target layer comprises an enhancement layer; and wherein when the reference layer comprises an enhancement layer, the target layer comprises a higher enhancement layer;

determine one or more in-layer reference prediction motion vectors for the target layer of the video data, wherein the one or more in-layer reference prediction motion vectors comprise one or more of a coded in-layer spatial neighbor, a coded in-layer earlier temporal neighbor in display order, and a coded in-layer later temporal neighbor in display order;

filter the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, and/or the reference prediction motion vector to form one or more filtered reference prediction motion vectors, wherein the filtering comprises one or more of the following operations: an averaging-type filter, a weighted averaging-type filter, a median-type filter;

select an optimum reference prediction motion vector during coding based at least in part on a motion vector candidate list associated with two or more of the

following motion vectors: the reference prediction motion vector, the one or more further reference prediction motion vectors, the one or more in-layer reference prediction motion vectors, the scaled motion vectors, and the one or more filtered reference prediction motion vectors; and

wherein the determination of the target prediction motion vector for the target layer is based at least in part on the selected optimum reference prediction motion vector.