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CLAIMS:

1. A method of sending an MPEG-2 bit stream having a plurality of views, comprising:

determining a subset of available views to send to a destination device; and

sending the bit stream comprising the subset of available views from a source device to the destination device

characterised by constructing, with the source device, a data structure for signaling that the bitstream comprises a first view of a scene associated with a first view order index and a second view of the scene associated with a second view order index, the data structure including a multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in the bitstream, wherein the individual view order index values comprise values for a first view order index and a second view order index, wherein the first view order index and the second view order index are non-consecutive; and

transmitting the data structure to the destination device.

2. The method of claim 1, wherein the data structure comprises a program map table and the bitstream comprises an MPEG-2 transport stream.

3. The method of claim 1, wherein the data structure comprises a program stream map and the bitstream comprises an MPEG-2 program stream.

4. The method of claim 1, wherein the view order index values are arranged in increasing order.

5. The method of claim 4, wherein the view order index values comprise a first view order index value and a second view order index value, wherein the second view order index value occurs immediately after the first view order index value in the MVC extension descriptor, and wherein a difference between the second view order index value and the first view order index value is greater than one.

6. The method of claim 1, wherein constructing the data structure further comprises constructing a hierarchy descriptor comprising a value for a view enhancement flag field that indicates that an associated program element enhances a number of views of the bitstream resulting from the program element referenced by a value of a hierarchy embedded layer index field of the hierarchy descriptor.

7. The method of claim 6, wherein constructing the hierarchy descriptor comprises setting the value of the view enhancement flag field to a value of zero.

8. The method of claim 6, further comprising determining that the bitstream includes an advanced video coding (AVC) base view of MVC, wherein constructing the hierarchy descriptor comprises setting a value of a hierarchy type field in the hierarchy descriptor to a value indicative that the bitstream includes a prefix MVC sub-bitstream comprising all prefix network abstraction layer (NAL) units comprising a type value equal to twenty.

9. The method of claim 8, wherein setting the value of the hierarchy type field comprises setting the value of the hierarchy type field to a value of fourteen.

10. The method of claim 1, further comprising:

constructing an access unit comprising a view component of the first view and a view component of the second view, wherein the view component of the first view occurs in the access unit immediately before the view component of the second view such that the first view order index and the second view order index for the view components occur nonconsecutively in the access unit; and

outputting the access unit.

11. An apparatus for sending an MPEG-2 bit stream having a plurality of views, comprising:

a video encoder that encodes a plurality of views of a scene by determining a subset of available views to send to a destination device; and having means for sending the bit stream comprising the subset of available views from a source device to the destination device

characterised by a multiplexer that constructs a data structure for signaling that the bitstream comprises a first view of the plurality of views of the scene associated with a first view order index and a second view of the plurality of views of the scene associated with a second view order index, the data structure including, a multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in the bitstream, wherein the individual view order index values comprise values for a first view order index and a second view order index, wherein the first view order index and the second view order index are non-consecutive; and

an output interface that outputs the data structure for transmission to the destination device.

12. The apparatus of claim 11, wherein the data structure comprises a program map table and the bitstream comprises an MPEG-2 transport stream.

13. The apparatus of claim 11, wherein the data structure comprises a program stream map and the bitstream comprises an MPEG-2 program stream.

14. The apparatus of claim 11, wherein to construct the data structure, the multiplexer constructs a multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in the bitstream, and wherein the view order index values are arranged in increasing order.

15. The apparatus of claim 14, wherein the view order index values comprise a first view order index value for the first view order index and a second view order index value for the second view order index, wherein the second view order index value occurs immediately after the first view order index value in the MVC extension descriptor, and wherein the difference between the second view order index value and the first view order index value is greater than one.

16. The apparatus of claim 11, wherein to construct the data structure, the multiplexer further that constructs a hierarchy descriptor comprising a value for a view enhancement flag field that indicates that an associated program element enhances a

number of views of the bitstream resulting from the program element referenced by a value of a hierarchy embedded layer index field of the hierarchy descriptor.

17. The apparatus of claim 16, wherein to construct the hierarchy descriptor, the multiplexer sets the value of the view enhancement flag field to a value of zero.

18. The apparatus of claim 16, wherein the multiplexer determines whether the bitstream includes an advanced video coding (AVC) base view of MVC, and when the bitstream includes the AVC base view of MVC, the multiplexer sets a value of a hierarchy type field in the hierarchy descriptor to a value indicative that the bitstream includes a prefix MVC sub-bitstream comprising all prefix network abstraction layer (NAL) units comprising a type value equal to twenty.

19. The apparatus of claim 18, wherein to set the value of the hierarchy type field, the multiplexer sets the value of the hierarchy type field to a value of fourteen.

20. The apparatus of claim 11,

wherein the multiplexer constructs an access unit comprising a view component of the first view and a view component of the second view, wherein the view component of the first view occurs in the access unit immediately before the view component of the second view such that the first view order index and the second view order index for the view components occur nonconsecutively in the access unit, and

wherein the output interface outputs the access unit.

21. The apparatus of claim 11, wherein the apparatus comprises at least one of:

an integrated circuit;

a microprocessor, and

a wireless communication device that includes the video encoder.

22. An apparatus for generating multiview video data, comprising:

means for determining a subset of available views to send to a destination device; and

means for sending the bit stream comprising the subset of available views from a source device to the destination device

characterised by

means for constructing, with the source device, a data structure for signaling that the bitstream comprises a first view of a scene associated with a first view order index and a second view of the scene associated with a second view order index, the data structure including a multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in the bitstream, wherein the individual view order index values comprise values for a first view order index and a second view order index, wherein the first view order index and the second view order index are non-consecutive; and

means for transmitting the data structure to the destination device.

23. The apparatus of claim 22, wherein the data structure comprises a program map table and the bitstream comprises an MPEG-2 transport stream.

24. The apparatus of claim 22, wherein the data structure comprises a program stream map and the bitstream comprises an MPEG-2 program stream.

25. The apparatus of claim 22, wherein the means for constructing the data structure comprises means for constructing a multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in the bitstream, wherein the individual view order index values comprise values for the first view order index and the second view order index, and wherein the view order index values are arranged in increasing order.

26. The apparatus of claim 25, wherein the view order index values comprise a first view order index value and a second view order index value, wherein the second view order index value occurs immediately after the first view order index value in the MVC extension descriptor, and wherein the difference between the second view order index value and the first view order index value is greater than one.

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27. The apparatus of claim 22, wherein the means for constructing the data structure further comprises means for constructing a hierarchy descriptor comprising a value for a view enhancement flag field that indicates that an associated program element enhances a number of views of the bitstream resulting from the program element referenced by a value of a hierarchy embedded layer index field of the hierarchy descriptor.

28. The apparatus of claim 27, wherein the means for constructing the hierarchy descriptor comprises means for setting the value of the view enhancement flag field to a value of zero.

29. The apparatus of claim 27, further comprising means for determining that the bitstream includes an advanced video coding (AVC) base view of MVC, wherein the means for constructing the hierarchy descriptor comprises means for setting a value of a hierarchy type field in the hierarchy descriptor to a value indicative that the bitstream includes a prefix MVC sub-bitstream comprising all prefix network abstraction layer (NAL) units comprising a type value equal to twenty.

30. The apparatus of claim 29, wherein the means for setting the value of the hierarchy type field comprises means for setting the value of the hierarchy type field to a value of fourteen.

31. The apparatus of claim 22, further comprising:

constructing an access unit comprising a view component of the first view and a view component of the second view, wherein the view component of the first view occurs in the access unit immediately before the view component of the second view such that the first view order index and the second view order index for the view components occur nonconsecutively in the access unit; and

outputting the access unit.

32. A computer-readable storage medium encoded with instructions for causing a processor of a video data source device to undertake the method of claim 1.

33. The computer-readable storage medium of claim 32, wherein the data structure comprises a program map table and the bitstream comprises an MPEG-2 transport stream.

34. The computer-readable storage medium of claim 32, wherein the data structure comprises a program stream map and the bitstream comprises an MPEG-2 program stream.

35. The computer-readable storage medium of claim 32, wherein the instructions to construct the data structure comprise instructions to construct a multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in the bitstream, wherein the individual view order index values comprise values for the first view order index and the second view order index, and wherein the view order index values are arranged in increasing order.

36. The computer-readable storage medium of claim 35, wherein the view order index values comprise a first view order index value and a second view order index value, wherein the second view order index value occurs immediately after the first view order index value in the MVC extension descriptor, and wherein the difference between the second view order index value and the first view order index value is greater than one.

37. The computer-readable storage medium of claim 32, wherein the instructions to construct the data structure further comprise instructions to construct a hierarchy descriptor comprising a value for a view enhancement flag field that indicates that an associated program element enhances a number of views of the bitstream resulting from the program element referenced by a value of a hierarchy embedded layer index field of the hierarchy descriptor.

38. The computer-readable storage medium of claim 37, wherein the instructions to construct the hierarchy descriptor comprise instructions to set the value of the view enhancement flag field to a value of zero.

39. The computer-readable storage medium of claim 37, further comprising instructions to determine that the bitstream includes an advanced video coding (AVC) base view of MVC, wherein constructing the hierarchy descriptor comprises setting a value of a hierarchy type field in the hierarchy descriptor to a value indicative that the bitstream includes a prefix MVC sub-bitstream comprising all prefix network abstraction layer (NAL) units comprising a type value equal to twenty.

40. The computer-readable storage medium of claim 39, wherein the instructions to set the value of the hierarchy type field comprise instructions to set the value of the hierarchy type field to a value of fourteen.

41. The computer-readable storage medium of claim 32, further comprising instructions to:

construct an access unit comprising a view component of the first view and a view component of the second view, wherein the view component of the first view occurs in the access unit immediately before the view component of the second view such that the first view order index and the second view order index for the view components occur nonconsecutively in the access unit; and

output the access unit.

CLAIMS

1. A method of generating multiview video data, comprising:

constructing, with a source device, a multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in a corresponding MPEG-2 (Motion Picture Experts Group) System standard bitstream, wherein the bitstream comprises a first view of a scene associated with a first view order index and a second view of the scene associated with a second view order index, wherein the first view order index and the second view order index are non-consecutive, wherein the individual view order index values comprise a first view order index value for the first view order index and a second view order index value for the second view order index, wherein the second view order index value occurs immediately after the first view order index value in the MVC extension descriptor, and wherein a difference between the second view order index value and the first view order index value is greater than one; and

outputting the MVC extension descriptor.

2. The method of claim **1**, wherein the MVC extension descriptor comprises a program map table and the bitstream comprises an MPEG-2 transport stream.

3. The method of claim **1**, wherein the MVC extension descriptor comprises a program stream map and the bitstream comprises an MPEG-2 program stream.

4. The method of claim **1**, wherein constructing the MVC extension descriptor comprises constructing the MVC extension descriptor such that the view order index values are arranged in increasing order.

5. The method of claim **1**, wherein constructing the MVC extension descriptor further comprises constructing a hierarchy descriptor comprising a value for a view enhancement flag field that indicates that an associated program element enhances a number of views of the bitstream resulting from the program element referenced by a value of a hierarchy embedded layer index field of the hierarchy descriptor.

6. The method of claim **5**, wherein constructing the hierarchy descriptor comprises setting the value of the view enhancement flag field to a value of zero.

7. The method of claim **5**, further comprising determining that the bitstream includes an advanced video coding (AVC) base view of MVC, wherein constructing the hierarchy descriptor comprises setting a value of a hierarchy type field in the hierarchy descriptor to a value indicative that the bitstream includes a prefix MVC sub-bitstream comprising all prefix network abstraction layer (NAL) units comprising a type value equal to twenty.

8. The method of claim **7**, wherein setting the value of the hierarchy type field comprises setting the value of the hierarchy type field to a value of fourteen.

9. The method of claim **1**, further comprising:

constructing an access unit comprising a view component of the first view and a view component of the second view, wherein the view component of the first view occurs in the access unit immediately before the view component of the second view such that the first view order index and the second view order index for the view components occur nonconsecutively in the access unit; and

outputting the access unit.

10. An apparatus for generating multiview video data, comprising:

a video encoder that encodes a plurality of views of a scene;

a multiplexer that constructs a multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in a corresponding MPEG-2 (Motion Picture Experts Group) System standard bitstream, wherein the bitstream comprises a first view of the plurality of views of the scene associated with a first view order index and a second view of the plurality of views of the scene associated with a second view order index, wherein the first view order index and the second view order index are non-consecutive, wherein the individual view order index values comprise a first view order index value for the first view order index and a second view order index value for the second view order index, wherein the second view order index value occurs immediately after the first view order index value in the MVC extension descriptor, and wherein a difference between the second view order index value and the first view order index value is greater than one; and

an output interface that outputs the MVC extension descriptor.

11. The apparatus of claim **10**, wherein the MVC extension descriptor comprises a program map table and the bitstream comprises an MPEG-2 transport stream.

12. The apparatus of claim **10**, wherein the MVC extension descriptor comprises a program stream map and the bitstream comprises an MPEG-2 program stream.

13. The apparatus of claim **10**, wherein the multiplexer constructs the MVC extension descriptor such that the view order index values are arranged in increasing order.

14. The apparatus of claim **10**, wherein to construct the MVC extension descriptor, the multiplexer further constructs a hierarchy descriptor comprising a value for a view enhancement flag field that indicates that an associated program element enhances a number of views of the bitstream resulting from the program element referenced by a value of a hierarchy embedded layer index field of the hierarchy descriptor.

15. The apparatus of claim **14**, wherein to construct the hierarchy descriptor, the multiplexer sets the value of the view enhancement flag field to a value of zero.

16. The apparatus of claim **14**, wherein the multiplexer determines whether the bitstream includes an advanced video coding (AVC) base view of MVC, and when the bitstream includes the AVC base view of MVC, the multiplexer sets a value of a hierarchy type field in the hierarchy descriptor to a value indicative that the bitstream includes a prefix MVC sub-bitstream comprising all prefix network abstraction layer (NAL) units comprising a type value equal to twenty.

17. The apparatus of claim **16**, wherein to set the value of the hierarchy type field, the multiplexer sets the value of the hierarchy type field to a value of fourteen.

18. The apparatus of claim **10**,

wherein the multiplexer constructs an access unit comprising a view component of the first view and a view component of the second view, wherein the view component of the first view occurs in the access unit immediately before the view component of the second view such that the first view order index and the second view order index for the view components occur nonconsecutively in the access unit, and

wherein the output interface outputs the access unit.

19. The apparatus of claim **10**, wherein the apparatus comprises at least one of:

an integrated circuit;

a microprocessor, and

a wireless communication device that includes the video encoder.

20. An apparatus for generating multiview video data, comprising:

means for constructing, with a source device, multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in a corresponding MPEG-2 (Motion Picture Experts Group) System standard bitstream, wherein the bitstream comprises a first view of a scene associated with a first view order index and a second view of the scene associated with a second view order index, wherein the first view order index and the second view order index are non-consecutive, wherein the individual view order index values comprise a first view order index value for the first view order index and a second view order index value for the second view order index, wherein the second view order index value occurs immediately after the first view order index value in the MVC extension descriptor, and wherein a difference between the second view order index value and the first view order index value is greater than one; and

means for outputting the MVC extension descriptor.

21. The apparatus of claim **20**, wherein the MVC extension descriptor comprises a program map table and the bitstream comprises an MPEG-2 transport stream.

22. The apparatus of claim **20**, wherein the MVC extension descriptor comprises a program stream map and the bitstream comprises an MPEG-2 program stream.

23. The apparatus of claim **20**, wherein the means for constructing the MVC extension descriptor comprises means for constructing the MVC extension descriptor such that the view order index values are arranged in increasing order.

24. The apparatus of claim **20**, wherein the means for constructing the MVC extension descriptor further comprises means for constructing a hierarchy descriptor comprising a value for a view enhancement flag field that indicates that an associated program element enhances a number of views of the bitstream resulting from the program element referenced by a value of a hierarchy embedded layer index field of the hierarchy descriptor.

25. The apparatus of claim **24**, wherein the means for constructing the hierarchy descriptor comprises means for setting the value of the view enhancement flag field to a value of zero.

26. The apparatus of claim **24**, further comprising means for determining that the bitstream includes an advanced video coding (AVC) base view of MVC, wherein the means for constructing the hierarchy descriptor comprises means for setting a value of a hierarchy type field in the hierarchy descriptor to a value indicative that the bitstream includes a prefix MVC sub-bitstream comprising all prefix network abstraction layer (NAL) units comprising a type value equal to twenty.

27. The apparatus of claim **26**, wherein the means for setting the value of the hierarchy type field comprises means for setting the value of the hierarchy type field to a value of fourteen.

28. The apparatus of claim **20**, further comprising:

constructing an access unit comprising a view component of the first view and a view component of the second view, wherein the view component of the first view occurs in the access unit immediately before the view component of the second view such that the first view order index and the second view order index for the view components occur nonconsecutively in the access unit; and

outputting the access unit.

29. A non-transitory computer-readable storage medium encoded with instructions for causing a processor of a video data source device to:

construct a multiview video coding (MVC) extension descriptor comprising individual view order index values for each view included in a corresponding MPEG-2 (Motion Picture Experts Group) System standard bitstream, wherein the bitstream comprises a first view of a scene associated with a first view order index and a second view of the scene associated with a second view order index, wherein the first view order index and the second view order index are non-consecutive, wherein the individual view order index values comprise a first view order index value for the first view order index and a second view order index value for the second view order index, wherein the second view order index value occurs immediately after the first view order index value in the MVC extension descriptor, and wherein a difference between the second view order index value and the first view order index value is greater than one; and

output the MVC extension descriptor.

30. The non-transitory computer-readable storage medium of claim **29**, wherein the MVC extension descriptor comprises a program map table and the bitstream comprises an MPEG-2 transport stream.

31. The non-transitory computer-readable storage medium of claim **29**, wherein the MVC extension descriptor comprises a program stream map and the bitstream comprises an MPEG-2 program stream.

32. The non-transitory computer-readable storage medium of claim **29**, wherein the instructions to construct the MVC extension descriptor comprise instructions to construct the MVC extension descriptor such that the view order index values are arranged in increasing order.

33. The non-transitory computer-readable storage medium of claim **29**, wherein the instructions to construct the MVC extension descriptor further comprise instructions to construct a hierarchy descriptor comprising a value for a view enhancement flag field that indicates that an associated program element enhances a number of views of the bitstream resulting from the program element referenced by a value of a hierarchy embedded layer index field of the hierarchy descriptor.

34. The non-transitory computer-readable storage medium of claim **33**, wherein the instructions to construct the hierarchy descriptor comprise instructions to set the value of the view enhancement flag field to a value of zero.

35. The non-transitory computer-readable storage medium of claim **33**, further comprising instructions to determine that the bitstream includes an advanced video coding (AVC) base view of MVC, wherein constructing the hierarchy descriptor comprises setting a value of a hierarchy type field in the hierarchy descriptor to a value indicative that the bitstream includes a prefix MVC sub-bitstream comprising all prefix network abstraction layer (NAL) units comprising a type value equal to twenty.

36. The non-transitory computer-readable storage medium of claim **35**, wherein the instructions to set the value of the hierarchy type field comprise instructions to set the value of the hierarchy type field to a value of fourteen.

37. The non-transitory computer-readable storage medium of claim **29**, further comprising instructions to:

construct an access unit comprising a view component of the first view and a view component of the second view, wherein the view component of the first view occurs in the access unit immediately before the view component of the second view such that the first view order index and the second view order index for the view components occur nonconsecutively in the access unit; and

output the access unit.