Amended Set of Claims

1. A method of processing video data, the method comprising:
receiving an indication of a maximum layer identification (ID) value included in an operation point, wherein the operation point comprises an independently decodable sub-bitstream of the video data and comprises two or more layers;
receiving a flag for a first layer with a layer ID value less than the maximum layer ID value; and
based on a value of the flag, determining whether the first layer is included in the operation point.

2. The method of claim 1 further comprising:
receiving a flag for each layer ID value between zero and the maximum layer ID minus one, wherein a value for each flag indicates whether each layer is included in the operation point.

3. The method of claim 1, wherein a first value for the flag indicates the first layer is included in the operation point and a second value for the flag indicates the first layer is not present in the operation point.

4. The method of claim 1, wherein the operation point comprises an operation point identification value, wherein the operation point identification value is associated with a set of decoding parameters identified in the video data.

5. The method of claim 1, wherein a video parameter set comprises the indication of the maximum layer identification (ID) value and the flag.

6. The method of claim 1, wherein receiving the indication of the maximum layer ID value for the operation point comprises receiving a syntax element identifying the maximum layer ID value.

7. The method of claim 1, wherein receiving the indication of the maximum layer ID value for the operation point comprises determining a maximum possible layer ID value.

8. The method of claim 1, wherein the method is performed by a media aware network element (MANE), and wherein the method further comprises:

in response to the first layer being included in the operation point, identifying a network abstraction layer (NAL) unit comprising a layer ID syntax element, wherein a value of the layer ID syntax element corresponds to the first layer.

9. A device for processing video data, the device comprising one or more processors configured to receive an indication of a maximum layer identification (ID) value included in an operation point, wherein the operation point comprises an independently decodable sub-bitstream of the video data and comprises two or more layers; receive a flag for a first layer with a layer ID value less than the maximum layer ID value; and, based on a value of the flag, determine whether the first layer is included in the operation point.

10. The device of claim 9, wherein the one or more processors are further configured to receive a flag for each layer ID value between zero and the maximum layer ID minus one, wherein a value for each flag indicates whether each layer is included in the operation point.

11. The device of claim 9, wherein a first value for the flag indicates the first layer is included in the operation point and a second value for the flag indicates the first layer is not present in the operation point.

12. The device of claim 9, wherein the operation point comprises an operation point identification value, wherein the operation point identification value is associated with a set of decoding parameters identified in the video data.

13. The device of claim 9, wherein a video parameter set comprises the indication of the maximum layer identification (ID) value and the flag.

14. The device of claim 9, wherein the one or more processors are configured to receive the indication of the maximum layer ID value for the operation point by receiving a syntax element identifying the maximum layer ID value.

15. The device of claim 9, wherein the one or more processors are configured to receive the indication of the maximum layer ID value for the operation point by determining a maximum possible layer ID value.

16. The device of claim 9, wherein the device comprises a media aware network element (MANE), and wherein the one or more processors are further configured to, in response to the first layer being included in the operation point, identify a network abstraction layer (NAL) unit comprising a layer ID syntax element, wherein a value of the layer ID syntax element corresponds to the first layer.

17. The device of claim 9, wherein the device comprises at least one of:
an integrated circuit;
a microprocessor; and,
a wireless communication device that includes the video decoder.

18. An apparatus for processing video data, the apparatus comprising:
means for receiving an indication of a maximum layer identification (ID) value included in an operation point, wherein the operation point comprises an independently decodable sub-bitstream of the video data and comprises two or more layers;
means for receiving a flag for a first layer with a layer ID value less than the maximum layer ID value;
means for determining whether the first layer is included in the operation point based on a value of the flag.

19. The apparatus of claim 18 further comprising:
means for receiving a flag for each layer ID value between zero and the maximum layer ID minus one, wherein a value for each flag indicates whether each layer is included in the operation point.

20. The apparatus of claim 18, wherein a first value for the flag indicates the first layer is included in the operation point and a second value for the flag indicates the first layer is not present in the operation point.

21. The apparatus of claim 18, wherein the operation point comprises an operation point identification value, wherein the operation point identification value is associated with a set of decoding parameters identified in the video data.

22. The apparatus of claim 18, wherein a video parameter set comprises the indication of the maximum layer identification (ID) value and the flag.

23. The apparatus of claim 18, wherein the means for receiving the indication of the maximum layer ID value for the operation point comprises means for receiving a syntax element identifying the maximum layer ID value.

24. The apparatus of claim 18, wherein the means for receiving the indication of the maximum layer ID value for the operation point comprises means for determining a maximum possible layer ID value.

25. The apparatus of claim 18, wherein the apparatus comprises a media aware network element (MANE), and wherein the apparatus further comprises means for identifying a network abstraction layer (NAL) unit comprising a layer ID syntax element in response to the first layer being included in the operation point, wherein a value of the layer ID syntax element corresponds to the first layer.

26. A computer readable storage medium storing instructions that when executed by one or more processors cause the one or more processors to:

receive an indication of a maximum layer identification (ID) value included in an operation point, wherein the operation point comprises an independently decodable sub-bitstream of the video data and comprises two or more layers;

receive a flag for a first layer with a layer ID value less than the maximum layer ID value;

based on a value of the flag, determine whether the first layer is included in the operation point.

27. The computer readable storage medium of claim 26 storing further instructions configured to cause the one or more processors to:

receive a flag for each layer ID value between zero and the maximum layer ID minus one, wherein a value for each flag indicates whether each layer is included in the operation point.

28. The computer-readable medium of claim 26, wherein a first value for the flag indicates the first layer is included in the operation point and a second value for the flag indicates the first layer is not present in the operation point.

29. The computer-readable medium of claim 26, wherein the operation point comprises an operation point identification value, wherein the operation point identification value is associated with a set of decoding parameters identified in the video data.

30. The computer-readable medium of claim 26, wherein a video parameter set comprises the indication of the maximum layer identification (ID) value and the flag.

31. The computer-readable medium of claim 26, wherein the one or more processors receive the indication of the maximum layer ID value for the operation point by receiving a syntax element identifying the maximum layer ID value.

32. The computer-readable medium of claim 26, wherein the one or more processors receive the indication of the maximum layer ID value for the operation point by determining a maximum possible layer ID value.

33. The computer-readable medium of claim 26 storing further instructions that cause the one or more processors to:

in response to the first layer being included in the operation point, identify a network abstraction layer (NAL) unit comprising a layer ID syntax element, wherein a value of the layer ID syntax element corresponds to the first layer.

34. A method of encoding video data, the method comprising:

determining, for the video data, an operation point, wherein the operation point comprises an independently decodable sub-bitstream of the video data and comprises two or more layers;

generating an indication of a maximum layer identification (ID) value for the operation point;

generating a flag for a first layer with a layer ID value less than the maximum layer ID value, wherein a value for the flag signals whether the first layer is included in the operation point.

35. The method of claim 34 further comprising:

generating a flag for each layer ID value between zero and the maximum layer ID minus one, wherein a value for each flag indicates whether each layer is included in the operation point.

36. The method of claim 34, wherein a first value for the flag indicates the first layer is included in the operation point and a second value for the flag indicates the first layer is not present in the operation point.

37. The method of claim 34, wherein the operation point comprises an operation point identification value, wherein the operation point identification value is associated with a set of decoding parameters identified in the video data.

38. The method of claim 34, further comprising:
generating a video parameter set, wherein the video parameter set comprises the indication of the maximum layer identification (ID) value and the flag.

39. The method of claim 34, generating the indication of the maximum layer ID value for the operation point comprises generating a syntax element identifying the maximum layer ID value.

40. The method of claim 34, wherein receiving the indication of the maximum layer ID value for the operation point comprises determining a maximum possible layer ID value.

41. The method of claim 34, wherein the method is performed by a video encoder.

42. A video coding device, the device comprising:
a video encoder configured to determine, for the video data, an operation point, wherein the operation point comprises an independently decodable sub-bitstream of the video data and comprises two or more layers; generate an indication of a maximum layer identification (ID) value for the operation point; and, generate a flag for a first layer with a layer ID value less than the maximum layer ID value, wherein a value for the flag signals whether the first layer is included in the operation point.

43. The video coding device of claim 42, wherein the video encoder is further configured to generate a flag for each layer ID value between zero and the maximum layer ID minus one, wherein a value for each flag indicates whether each layer is included in the operation point.

44. The video coding device of claim 42, wherein a first value for the flag indicates the first layer is included in the operation point and a second value for the flag indicates the first layer is not present in the operation point.

45. The video coding device of claim 42, wherein the operation point comprises an operation point identification value, wherein the operation point identification value is associated with a set of decoding parameters identified in the video data.

46. The video coding device of claim 42, wherein the video encoder is further configured to generate a video parameter set, wherein the video parameter set comprises the indication of the maximum layer identification (ID) value and the flag.

47. The video coding device of claim 42, wherein the video coder is configured to generate the indication of the maximum layer ID value for the operation point by generating a syntax element identifying the maximum layer ID value.

48. The video coding device of claim 42, wherein the video encoder is configured to generate the indication of the maximum layer ID value for the operation point by determining a maximum possible layer ID value.

49. The video coding device of claim 42, wherein the method is performed by a video encoder.

CLAIMS

1. An invention not claimed in any divisional application.