

WHAT IS CLAIMED IS:

1. A method for video decoding of a scalable bitstream performed by at least one processor, the method comprising:
 - parsing at least one video parameter set (VPS) comprising at least one syntax element indicating whether at least one layer in the scalable bitstream is one of a dependent layer of the scalable bitstream and an independent layer of the scalable bitstream;
 - determining a number of dependent layers, including the dependent layer, of the scalable bitstream based on a plurality of flags included in the VPS;
 - decoding a picture in the dependent layer by parsing and interpreting an inter-layer reference picture (ILRP) list; and
 - decoding a picture in an independent layer without parsing and interpreting the ILRP list.
2. The method of claim 1, wherein decoding the picture in the independent layer comprises parsing and interpreting a reference picture list which does not include any decoded picture of another layer.
3. The method of claim 1, wherein the inter-layer reference picture list includes a decoded picture of the other layer.
4. The method of claim 1, wherein parsing the at least one VPS further comprises determining whether another syntax element indicates a maximum number of layers.

5. The method of claim 1, wherein parsing the at least one VPS further comprises determining whether the VPS comprises a flag indicating whether another layer in the scalable bitstream is a reference layer for the at least one layer.

6. The method of claim 5, wherein parsing the at least one VPS further comprises determining whether the flag indicates the other layer as the reference layer for the at least one layer by specifying an index of the other layer and an index of the at least one layer, and

wherein parsing the at least one VPS further comprises determining whether the VPS comprises another syntax element indicating a value less than the determined number of dependent layers.

7. The method of claim 5, wherein parsing the at least one VPS further comprises determining whether the flag indicates the other layer as not being the reference layer for the at least one layer by specifying an index of the other layer and an index of the at least one layer, and

wherein parsing the at least one VPS further comprises determining whether the VPS comprises another syntax element indicating a value less than the determined number of dependent layers.

8. The method of claim 1, wherein parsing the at least one VPS further comprises determining whether the VPS comprises a flag indicating whether a plurality of layers, including the at least one layer, are to be decoded by interpreting the ILRP list.

9. The method of claim 1, wherein parsing the at least one VPS further comprises determining whether the VPS comprises a flag indicating whether a plurality of layers, including the at least one layer, are to be decoded without interpreting the ILRP list.

10. The method of claim 1, wherein parsing the at least one VPS further comprises determining whether the VPS comprises a flag indicating whether a plurality of layers, including the at least one layer, are to be decoded by interpreting the ILRP list.

11. An apparatus for video decoding of a scalable bitstream, the apparatus comprising:

at least one memory configured to store computer program code;

at least one processor configured to access the computer program code and operate as instructed by the computer program code, the computer program code including:

parsing code configured to cause the at least one processor to parse at least one video parameter set (VPS) comprising at least one syntax element indicating whether at least one layer in the scalable bitstream is one of a dependent layer of the scalable bitstream and an independent layer of the scalable bitstream;

determining code configured to cause the at least one processor to determine a number of dependent layers, including the dependent layer, of the scalable bitstream based on a plurality of flags included in the VPS;

first decoding code configured to cause the at least one processor to decode a picture in the dependent layer by parsing and interpreting an inter-layer reference picture (ILRP) list; and

second decoding code configured to cause the at least one processor to decode a picture in an independent layer without parsing and interpreting the ILRP list.

12. The apparatus of claim 11, wherein the second decoding code is further configured to cause the at least one processor to decode the picture in the independent layer by parsing and interpreting a reference picture list which does not include any decoded picture of another layer.

13. The apparatus of claim 11, wherein the inter-layer reference picture list includes a decoded picture of the other layer.

14. The apparatus of claim 11, wherein the parsing code is further configured to cause the at least one processor to parse the at least one VPS by determining whether another syntax element indicates a maximum number of layers.

15. The apparatus of claim 11, wherein the parsing code is further configured to cause the at least one processor to parse the at least one VPS by determining whether the VPS comprises a flag indicating whether another layer in the scalable bitstream is a reference layer for the at least one layer.

16. The apparatus of claim 15, wherein the parsing code is further configured to cause the at least one processor to parse the at least one VPS by determining whether the flag indicates

the other layer as the reference layer for the at least one layer by specifying an index of the other layer and an index of the at least one layer, and

wherein the parsing code is further configured to cause the at least one processor to parse the at least one VPS by determining whether the VPS comprises another syntax element indicating a value less than the determined number of dependent layers.

17. The apparatus of claim 15, wherein the parsing code is further configured to cause the at least one processor to parse the at least one VPS by determining whether the flag indicates the other layer as not being the reference layer for the at least one layer by specifying an index of the other layer and an index of the at least one layer, and

wherein the parsing code is further configured to cause the at least one processor to parse the at least one VPS by determining whether the VPS comprises another syntax element indicating a value less than the determined number of dependent layers.

18. The apparatus of claim 11, wherein the parsing code is further configured to cause the at least one processor to parse the at least one VPS by determining whether the VPS comprises a flag indicating whether a plurality of layers, including the at least one layer, are to be decoded by interpreting the ILRP list.

19. The apparatus of claim 11, wherein the parsing code is further configured to cause the at least one processor to parse the at least one VPS by determining whether the VPS comprises a flag indicating whether a plurality of layers, including the at least one layer, are to be decoded without interpreting the ILRP list.

20. A non-transitory computer readable medium storing a program configured to cause a computer to:
- parse at least one video parameter set (VPS) comprising at least one syntax element indicating whether at least one layer in the scalable bitstream is one of a dependent layer of the scalable bitstream and an independent layer of the scalable bitstream;
 - determine a number of dependent layers, including the dependent layer, of the scalable bitstream based on a plurality of flags included in the VPS;
 - decode a picture in the dependent layer by parsing and interpreting an inter-layer reference picture (ILRP) list; and
 - decode a picture in an independent layer without parsing and interpreting the ILRP list.