CLAIMS

1. A method of processing video data, comprising:

performing a conversion between a video and a bitstream of the video according to a rule,

wherein the bitstream comprises one or more layers comprising one or more sublayers comprising one or more pictures comprising one or more subpictures,

wherein the rule specifies a rewriting operation selectively performed on one or more syntax elements during a subpicture sub-bitstream extraction process by which an output target sub-bitstream is extracted from the bitstream,

wherein the one or more syntax elements include information of the output target sub-bitstream;

wherein the one or more syntax elements include: (a) a first syntax element that indicates a coding level to which the output target sub-bitstream conforms, and (b) a second syntax element that indicates coding levels to which sublayer sequences in the output target sub-bitstream having index values 0 to tIdTarget-1 conform, where tIdTarget is an integer representing a target highest temporal layer identifier of sublayers in the output target sub-bitstream.

2. The method of claim 1, wherein the one or more syntax elements include: (a) a third syntax element that is indicative of a coded picture buffer, CPB, size of each sublayer sequence in the output target sub-bitstream, and (b) a fourth syntax element that indicates a bit rate value of each sublayer sequence in the output target sub-bitstream, wherein the each sublayer sequence has an index value k, k in the range of 0 to tIdTarget, inclusive.

3. The method of claim 1 or 2, wherein the one or more syntax elements include: a fifth syntax element that is indicative of whether a sublayer sequence with the target highest temporal layer identifier tIdTarget in the output target sub-bitstream is handled as having a constant bit rate.

4. The method of any one of claims 1-3, wherein when present, the one or more syntax elements are included in a video parameter set referenced by the output target sub-bitstream.

5. The method of any one of claims 1-3, wherein, in case that the output target sub-bitstream comprises a single layer, the one or more syntax elements are included in a sequence parameter set referenced by the output target sub-bitstream.

6. The method of any one of claims 1-5, wherein the video comprises a 360-degree video.

7. The method of any one of claims 1-6, wherein the conversion comprises encoding the video into the bitstream.

8. The method of any one of claims 1-6, wherein the conversion comprises decoding the video from the bitstream.

9. An apparatus (3600) for processing video data comprising a processor (3602) and a non-transitory memory (3604) with instructions thereon, wherein the instructions upon execution by the processor, cause the processor to:

perform a conversion between a video and a bitstream of the video according to a rule,

wherein the bitstream comprises one or more layers comprising one or more sublayers comprising one or more pictures comprising one or more subpictures,

wherein the rule specifies a rewriting operation selectively performed on one or more syntax elements during a subpicture sub-bitstream extraction process by which an output target sub-bitstream is extracted from the bitstream,

wherein the one or more syntax elements include information of the output target sub-bitstream;

wherein the one or more syntax elements include: (a) a first syntax element that indicates a coding level to which the output target sub-bitstream conforms, and (b) a second syntax element that indicates coding levels to which sublayer sequences in the output target sub-bitstream having index values 0 to tIdTarget-1 conform, where tIdTarget is an integer representing a target highest temporal layer identifier of sublayers in the output target sub-bitstream.

10. The apparatus (3600) of claim 9, wherein the one or more syntax elements include: (a) a third syntax element that is indicative of a coded picture buffer, CPB, size of each sublayer sequence in the output target sub-bitstream, and (b) a fourth syntax element that indicates a bit rate value of each sublayer sequence in the output target sub-bitstream, wherein the each sublayer sequence has an index value k, k in the range of 0 to tIdTarget, inclusive.

11. The apparatus of claim 9 or 10, wherein the one or more syntax elements include: a fifth syntax element that is indicative of whether a sublayer sequence with the target highest temporal layer identifier tIdTarget in the output target sub-bitstream is handled as having a constant bit rate.

12. The apparatus of any one of claims 9-11, wherein when present, the one or more syntax elements are included in a video parameter set referenced by the output target sub-bitstream, and

wherein, in case that the output target sub-bitstream comprises a single layer, the one or more syntax elements are included in a sequence parameter set referenced by the output target sub-bitstream.

13. A non-transitory computer-readable storage medium storing instructions that cause a processor to:

perform a conversion between a video and a bitstream of the video according to a rule,

wherein the bitstream comprises one or more layers comprising one or more sublayers comprising one or more pictures comprising one or more subpictures,

wherein the rule specifies a rewriting operation selectively performed on one or more syntax elements during a subpicture sub-bitstream extraction process by which an output target sub-bitstream is extracted from the bitstream,

wherein the one or more syntax elements include information of the output target sub-bitstream;

wherein the one or more syntax elements include: (a) a first syntax element that indicates a coding level to which the output target sub-bitstream conforms, and (b) a second syntax element that indicates coding levels to which sublayer sequences in the output target sub-bitstream having index values 0 to tIdTarget-1 conform, where tIdTarget is an integer

representing a target highest temporal layer identifier of sublayers in the output target sub-bitstream.

14. The non-transitory computer-readable storage medium of claim 13, wherein the one or more syntax elements include: (a) a third syntax element that is indicative of a coded picture buffer, CPB, size of each sublayer sequence in the output target sub-bitstream, and (b) a fourth syntax element that indicates a bit rate value of each sublayer sequence in the output target sub-bitstream, wherein the each sublayer sequence has an index value k, k in the range of 0 to tIdTarget, inclusive, and

wherein the one or more syntax elements include: a fifth syntax element that is indicative of whether a sublayer sequence with the target highest temporal layer identifier tIdTarget in the output target sub-bitstream is handled as having a constant bit rate.

15. The non-transitory computer-readable storage medium of claim 13 or 14, wherein when present, the one or more syntax elements are included in a video parameter set referenced by the output target sub-bitstream, and

wherein, in case that the output target sub-bitstream comprises a single layer, the one or more syntax elements are included in a sequence parameter set referenced by the output target sub-bitstream.

16. A non-transitory computer-readable recording medium storing a bitstream of a video which is generated by a method performed by a video processing apparatus, wherein the method comprises:

generating the bitstream of the video according to a rule,

wherein the bitstream comprises one or more layers comprising one or more sublayers comprising one or more pictures comprising one or more subpictures,

wherein the rule specifies a rewriting operation selectively performed on one or more syntax elements during a subpicture sub-bitstream extraction process by which an output target sub-bitstream is extracted from the bitstream,

wherein the one or more syntax elements include information of the output target sub-bitstream;

wherein the one or more syntax elements include: (a) a first syntax element that indicates a coding level to which the output target sub-bitstream conforms, and (b) a second syntax element that indicates coding levels to which sublayer sequences in the output target sub-bitstream having index values 0 to tIdTarget-1 conform, where tIdTarget is an integer representing a target highest temporal layer identifier of sublayers in the output target sub-bitstream.

17. The non-transitory computer-readable recording medium of claim 16, wherein the one or more syntax elements include: (a) a third syntax element that is indicative of a coded picture buffer, CPB, size of each sublayer sequence in the output target sub-bitstream, and (b) a fourth syntax element that indicates a bit rate value of each sublayer sequence in the output target sub-bitstream, wherein the each sublayer sequence has an index value k, k in the range of 0 to tIdTarget, inclusive, and

wherein the one or more syntax elements include: a fifth syntax element that is indicative of whether a sublayer sequence with the target highest temporal layer identifier tIdTarget in the output target sub-bitstream is handled as having a constant bit rate.

18. The non-transitory computer-readable recording medium of claim 16 or 17, wherein when present, the one or more syntax elements are included in a video parameter set referenced by the output target sub-bitstream, and

wherein, in case that the output target sub-bitstream comprises a single layer, the one or more syntax elements are included in a sequence parameter set referenced by the output target sub-bitstream.