CLAIMS

1. A method of processing video data, comprising:

determining, for a conversion between a video unit of a video and a bitstream of the video, a first syntax element and a second syntax element; and

performing the conversion based on the determining,

wherein the first syntax element and the second syntax element have an equivalent functionality,

wherein the first syntax element is included at a first level in the video unit in the bitstream, and the second syntax element is included at a second level in the video unit different from the first level,

wherein the first level is a picture header and the second level is a slice header, a sequence parameter set or a picture parameter set, or wherein the first level is a slice header and the second level is a sequence parameter set or a picture parameter set; and

wherein whether a third syntax element is included in the sequence parameter set depends on a color format of the sequence parameter set, and wherein the third syntax element specifies whether a joint coding of chroma residuals is enabled.

2. The method of claim 1, wherein in a case that the first syntax element specifies whether a coding tool comprising luma mapping and chroma scaling is enabled and the second syntax element specifies whether the coding tool is enabled, the second syntax element is included in the sequence parameter set, and when the first syntax element is included in the bitstream, the first syntax element is included in the slice header, and

wherein the first syntax element is not included in the slice header in a case that the second syntax element specifies that the coding tool is not enabled.

3. The method of claim 1, wherein in a case that the first syntax element specifies whether a use of an explicit scaling list is enabled and the second syntax element specifies whether the use of the explicit scaling list is enabled, the second syntax element is included in the sequence parameter set, and when the first syntax element is included in the bitstream, the first syntax element is included in the slice header, and

wherein the first syntax element is not included in the slice header in a case that the second syntax element specifies the use of the explicit scaling list is not enabled.

4. The method of claim 1, wherein in a case that the first syntax element specifies whether ALF is enabled and the second syntax element specifies whether the ALF is enabled, the second syntax element is included in the sequence parameter set, and when the first syntax element is included in the bitstream, the first syntax element is included in the slice header, and

wherein the first syntax element is not included in the slice header in a case that the second syntax element specifies the ALF is not enabled.

5. The method of claim 1, wherein in a case that the first syntax element specifies whether mmvd-fullpel-only is enabled and the second syntax element specifies whether mmvd-fullpel-only is enabled, when the first syntax element and the second syntax element are included in the bitstream, the first syntax element is included in the picture header, and the second syntax element is included in the sequence parameter set, and

wherein the first syntax element is not included in the picture header in a case that the second syntax element is not included in the sequence parameter set.

6. The method of any one of claims 1-5, wherein the third syntax element is not included in the sequence parameter set when the color format of the sequence parameter set is 4:0:0, and the third syntax element is included in the sequence parameter set when the color format of the sequence parameter set is 4:2:0, 4:2:2, or 4:4:4.

7. The method of any one of claims 1-6, wherein a joint_cbcr_sign_flag is included at a level different from the sequence parameter set in the bitstream when the third syntax element specifies a joint coding of chroma residuals is enabled, and

wherein the joint_cbcr_sign_flag is not included in the bitstream when the third syntax element specifies a joint coding of chroma residuals is not enabled.

8. The method of any one of claims 1-7, wherein a sps_mts_enabled_flag specifying whether sps_explicit_mts_intra_enabled_flag and sps_explicit_mts_inter_enabled_flag are present is included in the sequence parameter set, and

wherein a fourth syntax element is included in the bitstream to indicate whether multiple transform selection MTS is disabled for all pictures.

9. The method of any one of claims 1-8, wherein the conversion includes encoding the video unit into the bitstream.

10. The method of any one of claims 1-8, wherein the conversion includes decoding the video unit from the bitstream.

11. An apparatus for processing video data comprising a processor and a non-transitory memory with instructions thereon, wherein the instructions upon execution by the processor, cause the processor to:

determine, for a conversion between a video unit of a video and a bitstream of the video, a first syntax element and a second syntax element; and

perform the conversion based on the determining,

wherein the first syntax element and the second syntax element have an equivalent functionality,

wherein the first syntax element is included at a first level in the video unit in the bitstream, and the second syntax element is included at a second level in the video unit different from the first level,

wherein the first level is a picture header and the second level is a slice header, a sequence parameter set or a picture parameter set, or wherein the first level is a slice header and the second level is a sequence parameter set or a picture parameter set; and

wherein whether a third syntax element is included in the sequence parameter set depends on a color format of the sequence parameter set, and wherein the third syntax element specifies whether a joint coding of chroma residuals is enabled.

12. The apparatus of claim 11, wherein in a case that the first syntax element specifies whether a coding tool comprising luma mapping and chroma scaling is enabled and the second syntax element specifies whether the coding tool is enabled, the second syntax element is included in the sequence parameter set, and when the first syntax element is included in the bitstream, the first syntax element is included in the slice header, and

wherein the first syntax element is not included in the slice header in a case that the second syntax element specifies that the coding tool is not enabled.

13. The apparatus of claim 11 or claim 12, wherein in a case that the first syntax element specifies whether a use of an explicit scaling list is enabled and the second syntax element specifies whether the use of the explicit scaling list is enabled, the second syntax element is included in the sequence parameter set, and when the first syntax element is included in the bitstream, the first syntax element is included in the slice header, and

wherein the first syntax element is not included in the slice header in a case that the second syntax element specifies the use of the explicit scaling list is not enabled.

14. The apparatus of any one of claim 11, wherein in a case that the first syntax element specifies whether ALF is enabled and the second syntax element specifies whether the ALF is enabled, the second syntax element is included in the sequence parameter set, and when the first syntax element is included in the bitstream, the first syntax element is included in the slice header, and

wherein the first syntax element is not included in the slice header in a case that the second syntax element specifies the ALF is not enabled.

15. The apparatus of any one of claim 11, wherein in a case that the first syntax element specifies whether mmvd-fullpel-only is enabled and the second syntax element specifies whether mmvd-fullpel-only is enabled, when the first syntax element and the second syntax element are included in the bitstream, the first syntax element is included in the picture header, and the second syntax element is included in the sequence parameter set, and

wherein the first syntax element is not included in the picture header in a case that the second syntax element is not included in the sequence parameter set.

16. The apparatus of any one of claims 11-15, wherein the third syntax element is not included in the sequence parameter set when the color format of the sequence parameter set is 4:0:0, and the third syntax element is included in the sequence parameter set when the color format of the sequence parameter set is 4:2:0, 4:2:2, or 4:4:4.

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

determine, for a conversion between a video unit of a video and a bitstream of the video, a first syntax element and a second syntax element; and

perform the conversion based on the determining,

wherein the first syntax element and the second syntax element have an equivalent functionality,

wherein the first syntax element is included at a first level in the video unit in the bitstream, and the second syntax element is included at a second level in the video unit different from the first level,

wherein the first level is a picture header and the second level is a slice header, a sequence parameter set or a picture parameter set, or wherein the first level is a slice header and the second level is a sequence parameter set or a picture parameter set; and

wherein whether a third syntax element is included in the sequence parameter set depends on a color format of the sequence parameter set, and wherein the third syntax element specifies whether a joint coding of chroma residuals is enabled.

18. 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:

determining, for a video unit of the video, a first syntax element and a second syntax element; and

generating the bitstream based on the determining,

wherein the first syntax element and the second syntax element have an equivalent functionality,

wherein the first syntax element is included at a first level in the video unit in the bitstream, and the second syntax element is included at a second level in the video unit different from the first level, and

wherein the first level is a picture header and the second level is a slice header, a sequence parameter set or a picture parameter set, or wherein the first level is a slice header and the second level is a sequence parameter set or a picture parameter set; and

wherein whether a third syntax element is included in the sequence parameter set depends on a color format of the sequence parameter set, and wherein the third syntax element specifies whether a joint coding of chroma residuals is enabled.