CLAIMS

1. A method of processing video data, comprising:

disabling, for a conversion between a video unit of a video and a bitstream of the video, a sub-picture coding mode for the video unit due to a resolution-changing coding mode is enabled for the video unit, wherein the video unit is a video sequence including one or more video pictures;

wherein the sub-picture coding mode is a mode in which a video picture is divided into multiple sub-pictures, and the resolution-changing coding mode is a mode in which a spatial resolution is allowed to change between the video pictures of the video unit.

2. The method of claim 1, wherein a first syntax element is included in the bitstream to indicate whether the sub-picture coding mode is enabled for the video unit.

3. The method of claim 2, wherein in case that the resolution-changing coding mode is disabled for the video sequence, a width of the one or more video pictures of the video sequence is set to be equal to a maximum width allowed for the video sequence.

4. The method of claim 3, wherein a second syntax element is included in the bitstream to indicate the maximum width allowed for the video sequence.

5. The method of claim 4, wherein a value of the second syntax element is restricted to be no smaller than 8.

6. The method of claim 4, wherein a third syntax element is included in the bitstream to indicate a maximum height allowed for the video sequence, and a value of the third syntax element is restricted to be no smaller than 8.

7. The method of any one of claims 1-6, wherein a fourth syntax element is included in the bitstream to indicate a width of a sub-picture, and a fifth syntax element is included in the bitstream to indicate a height of a sub-picture.

8. The method of any one of claims 1-7, wherein a sixth syntax element is included in the bitstream to indicate a top-left position of a sub-picture.

9. The method of any one of claims 1-8, wherein a position and a dimension of a sub-picture are determined excluding referring to a syntax element subpic_grid_idx.

10. The method of any one of claims 1-9, wherein the conversion comprises encoding the video into the bitstream.

11. The method of any one of claims 1-9, wherein the conversion comprises decoding the video from the bitstream.

12. 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:

disable, for a conversion between a video unit of a video and a bitstream of the video, a sub-picture coding mode for the video unit due to a resolution-changing coding mode is enabled for the video unit, wherein the video unit is a video sequence including one or more video pictures;

wherein the sub-picture coding mode is a mode in which a video picture is divided into multiple sub-pictures, and the resolution-changing coding mode is a mode in which a spatial resolution is allowed to change between the video pictures of the video unit.

13. The apparatus of claim 12, wherein

a first syntax element is included in the bitstream to indicate whether the sub-picture coding mode is enabled for the video unit;

in case that the resolution-changing coding mode is disabled for the video sequence, a width of the one or more video pictures of the video sequence is set to be equal to a maximum width allowed for the video sequence;

a second syntax element is included in the bitstream to indicate the maximum width allowed for the video sequence;

a value of the second syntax element is restricted to be no smaller than 8;

a third syntax element is included in the bitstream to indicate a maximum height allowed for the video sequence, and a value of the third syntax element is restricted to be no smaller than 8;

a fourth syntax element is included in the bitstream to indicate a width of a sub-picture, and a fifth syntax element is included in the bitstream to indicate a height of a sub-picture; and

a sixth syntax element is included in the bitstream to indicate a top-left position of a sub-picture.

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

disable, for a conversion between a video unit of a video and a bitstream of the video, a sub-picture coding mode for the video unit due to a resolution-changing coding mode is enabled for the video unit, wherein the video unit is a video sequence including one or more video pictures;

wherein the sub-picture coding mode is a mode in which a video picture is divided into multiple sub-pictures, and the resolution-changing coding mode is a mode in which a spatial resolution is allowed to change between the video pictures of the video unit.

15. The non-transitory computer-readable storage medium of claim 17, wherein

a first syntax element is included in the bitstream to indicate whether the sub-picture coding mode is enabled for the video unit;

in case that the resolution-changing coding mode is disabled for the video sequence, a width of the one or more video pictures of the video sequence is set to be equal to a maximum width allowed for the video sequence;

a second syntax element is included in the bitstream to indicate the maximum width allowed for the video sequence;

a value of the second syntax element is restricted to be no smaller than 8;

a third syntax element is included in the bitstream to indicate a maximum height allowed for the video sequence, and a value of the third syntax element is restricted to be no smaller than 8;

a fourth syntax element is included in the bitstream to indicate a width of a sub-picture, and a fifth syntax element is included in the bitstream to indicate a height of a sub-picture; and

a sixth syntax element is included in the bitstream to indicate a top-left position of a sub-picture.

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:

disabling, for a video unit of a video, a sub-picture coding mode for the video unit due to a resolution-changing coding mode is enabled for the video unit, wherein the video unit is a video sequence including one or more video pictures; and

generating the bitstream based on the determining,

wherein the sub-picture coding mode is a mode in which a video picture is divided into multiple sub-pictures, and the resolution-changing coding mode is a mode in which a spatial resolution is allowed to change between the video pictures of the video unit.

17. The non-transitory computer-readable recording medium of claim 19, wherein

a first syntax element is included in the bitstream to indicate whether the sub-picture coding mode is enabled for the video unit;

in case that the resolution-changing coding mode is disabled for the video sequence, a width of the one or more video pictures of the video sequence is set to be equal to a maximum width allowed for the video sequence;

a second syntax element is included in the bitstream to indicate the maximum width allowed for the video sequence;

a value of the second syntax element is restricted to be no smaller than 8;

a third syntax element is included in the bitstream to indicate a maximum height allowed for the video sequence, and a value of the third syntax element is restricted to be no smaller than 8;

a fourth syntax element is included in the bitstream to indicate a width of a sub-picture, and a fifth syntax element is included in the bitstream to indicate a height of a sub-picture; and

a sixth syntax element is included in the bitstream to indicate a top-left position of a sub-picture.