CLAIMS

1. A method of processing video data, comprising:

performing a conversion between a video comprising a video unit and a bitstream of the video,

wherein the bitstream conforms to a format rule, and

wherein the format rule specifies that a syntax element indicating whether an in-loop filtering operation is allowed to be performed across slice boundaries is selectively included in the bitstream responsive to whether the video unit is partitioned into more than one slice.

2. The method of claim 1, wherein the syntax element is in a picture parameter set.

3. The method of claim 1 or 2, wherein the video unit is a sub-picture, and the format rule specifies that the syntax element is included in the bitstream in response to the sub-picture being partitioned into only one slice.

4. The method of claim 3, wherein the format rule specifies that the syntax element is included in the bitstream in response to a first flag being equal to 1 which specifies that each sub-picture consists of one and only one rectangular slice.

5. The method of claim 4, wherein the first flag is single_slice_per_subpic_flag, and wherein the first flag is in a picture parameter set.

6. The method of any of claims 1-5, wherein the video unit is a picture, and the format rule further specifies that the syntax element is included in the bitstream in response to the picture being partitioned in a non-rectangular shape.

7. The method of claim 6, wherein the format rule specifies that the syntax element is included in the bitstream in response to a second flag being equal to 0 which specifies that a raster-san slice mode is in use for the picture.

8. The method of claim 7, wherein the raster-san slice mode is a non-rectangular slice mode, wherein the second flag is rect_slice_flag, and wherein the second flag is in a picture parameter set.

9. The method of any of claims 1-8, wherein the format rule further specifies that information about applicability of a tool to the conversion is allowed to be indicated in the bitstream at both a video slice level and a video picture level, and the tool maps luma samples to particular values and selectively applies a scaling operation to the values of chroma samples.

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

11. The method of any of claims 1-9, wherein the performing 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:

perform a conversion between a video comprising a video unit and a bitstream of the video, wherein the bitstream conforms to a format rule, and

wherein the format rule specifies that a syntax element indicating whether an in-loop filtering operation is allowed to be performed across slice boundaries is selectively included in the bitstream responsive to whether the video unit is partitioned into more than one slice.

13. The apparatus of claim 12, wherein the syntax element is in a picture parameter set;

wherein the video unit is a sub-picture, and the format rule specifies that the syntax element is included in the bitstream in response to the sub-picture being partitioned into only one slice;

wherein the format rule specifies that the syntax element is included in the bitstream in response to a first flag being equal to 1 which specifies that each sub-picture consists of one and only one rectangular slice;

wherein the first flag is single_slice_per_subpic_flag, and wherein the first flag is in a picture parameter set.

14. The apparatus of claim 12 or 13, wherein the video unit is a picture, and the format rule further specifies that the syntax element is included in the bitstream in response to the picture being partitioned in a non-rectangular shape;

wherein the format rule specifies that the syntax element is included in the bitstream in response to a second flag being equal to 0 which specifies that a raster-san slice mode is in use for the picture;

wherein the raster-san slice mode is a non-rectangular slice mode, and the second flag is rect_slice_flag, and wherein the second flag is in a picture parameter set;

wherein the format rule further specifies that information about applicability of a tool to the conversion is allowed to be indicated in the bitstream at both a video slice level and a video picture level, and the tool maps luma samples to particular values and selectively applies a scaling operation to the values of chroma samples.

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

perform a conversion between a video comprising a video unit and a bitstream of the video, wherein the bitstream conforms to a format rule, and

wherein the format rule specifies that a syntax element indicating whether an in-loop filtering operation is allowed to be performed across slice boundaries is selectively included in the bitstream responsive to whether the video unit is partitioned into more than one slice.

16. The non-transitory computer-readable storage medium of claim 15, wherein the syntax element is in a picture parameter set;

wherein the video unit is a sub-picture, and the format rule specifies that the syntax element is included in the bitstream in response to the sub-picture being partitioned into only one slice;

wherein the format rule specifies that the syntax element is included in the bitstream in response to a first flag being equal to 1 which specifies that each sub-picture consists of one and only one rectangular slice;

wherein the first flag is single_slice_per_subpic_flag, and wherein the first flag is in a picture parameter set.

17. The non-transitory computer-readable storage medium of claim 15 or 16, wherein the video unit is a picture, and the format rule further specifies that the syntax element is included in the bitstream in response to the picture being partitioned in a non-rectangular shape;

wherein the format rule specifies that the syntax element is included in the bitstream in response to a second flag being equal to 0 which specifies that a raster-san slice mode is in use for the picture;

wherein the raster-san slice mode is a non-rectangular slice mode, and the second flag is rect_slice_flag, and wherein the second flag is in a picture parameter set;

wherein the format rule further specifies that information about applicability of a tool to the conversion is allowed to be indicated in the bitstream at both a video slice level and a video picture level, and the tool maps luma samples to particular values and selectively applies a scaling operation to the values of chroma samples.

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:

generating a bitstream for a video comprising a video unit,

wherein the bitstream conforms to a format rule, and

wherein the format rule specifies that a syntax element indicating whether an in-loop filtering operation is allowed to be performed across slice boundaries is selectively included in the bitstream responsive to whether the video unit is partitioned into more than one slice.

19. The non-transitory computer-readable recording medium of claim 18, wherein the syntax element is in a picture parameter set;

wherein the video unit is a sub-picture, and the format rule specifies that the syntax element is included in the bitstream in response to the sub-picture being partitioned into only one slice;

wherein the format rule specifies that the syntax element is included in the bitstream in response to a first flag being equal to 1 which specifies that each sub-picture consists of one and only one rectangular slice;

wherein the first flag is single_slice_per_subpic_flag, and wherein the first flag is in a picture parameter set.

20. The non-transitory computer-readable recording medium of claim 18 or 19, wherein the video unit is a picture, and the format rule further specifies that the syntax element is included in the bitstream in response to the picture being partitioned in a non-rectangular shape;

wherein the format rule specifies that the syntax element is included in the bitstream in response to a second flag being equal to 0 which specifies that a raster-san slice mode is in use for the picture;

wherein the raster-san slice mode is a non-rectangular slice mode, and the second flag is rect_slice_flag, and wherein the second flag is in a picture parameter set;

wherein the format rule further specifies that information about applicability of a tool to the conversion is allowed to be indicated in the bitstream at both a video slice level and a video picture level, and the tool maps luma samples to particular values and selectively applies a scaling operation to the values of chroma samples.