CLAIMS

What is claimed is:

1. An video decoding apparatus for video processing, comprising one or more processors, wherein the one or more processors are configured to:

determine that affine mode is enabled for a video sequence;

determine, based on a value of an adaptive motion vector difference resolution (AMVR) enablement indicator, whether an affine mode AMVR enablement indicator is present in a parameter set associated with the video sequence; and

decode the video sequence based on the determination of whether the affine mode AMVR enablement indicator is present in the parameter set associated with the video sequence.

2. The video decoding apparatus of claim 1, wherein, on a condition that the value of the AMVR enablement indicator indicates AMVR mode is enabled for the video sequence, the one or more processors are configured to determine that the affine mode AMVR enablement indicator is present in the parameter set associated with the video sequence., and

3. The apparatus of claim 1, wherein, on a condition that the value of the AMVR enablement indicator indicates AMVR mode is disabled for the video sequence, the one or more processors are configured to determine that the affine mode AMVR enablement indicator is not present in the parameter set associated with the video sequence.

4. The apparatus of claim 1, wherein the one or more processors are configured to obtain the affine mode AMVR enablement indicator in response to a determination that the affine mode AMVR enablement indicator is present in the parameter set associated with the video sequence.

5. The apparatus of claim 1, wherein the one or more processors are configured to set a value of the affine mode AMVR enablement indicator to a value indicative of disabling AMVR for the video sequence with the affine mode enabled in response to a determination that the affine mode AMVR enablement indicator is not present in the parameter set associated with the video sequence.

~~6~~3. The video decoding apparatus of claim 1, wherein the one or more processors are further configured to:

set the value of the AMVR enablement indicator to a value indicative of disabling AMVR for the video sequence based on general constraint information (GCI); and

determine that the affine mode AMVR enablement indicator is not present in the parameter set associated with the video sequence based on the value of the AMVR enablement indicator indicative of disabling AMVR for the video sequence.

~~7~~4. The video decoding apparatus of claim 1, wherein the one or more processors are further configured to:

determine that intra-block copy (IBC) is enabled for the video sequence; and

obtain an IBC AMVR enablement indicator in response to the determination that IBC is enabled for the video sequence, wherein the video sequence is decoded based on the IBC AMVR enablement indicator.

~~8. The apparatus of claim 1, wherein the one or more processors are further configured to:~~

~~based on a value of the affine mode AMVR enablement indicator indicative of enabling AMVR for the video sequence with the affine mode enabled, adaptively determine a precision of a motion vector difference associated with a coding block of the video sequence based on a coding mode associated with the coding block.~~

~~9. An apparatus for video processing, comprising one or more processors, wherein the one or more processors are configured to:~~

~~determine that an affine mode is enabled for a video sequence;~~

~~determine, based on a value of an adaptive motion vector difference resolution (AMVR) enablement indicator, whether to include an affine mode AMVR enablement indicator in a parameter set associated with the video sequence; and~~

~~generate the parameter set associated with the video sequence based on the determination of whether to include the affine mode AMVR enablement indicator in the parameter set.~~

~~10~~5. A video decoding method ~~for video processing~~, comprising:

determining that affine mode is enabled for a video sequence;

determining, based on a value of an adaptive motion vector difference resolution (AMVR) enablement indicator, whether an affine mode AMVR enablement indicator is present in a parameter set associated with the video sequence; and

decoding the video sequence based on the determination of whether the affine mode AMVR enablement indicator is present in the parameter set associated with the video sequence.

~~11~~6. The video decoding method of claim ~~10~~5, further comprising, on a condition that the value of the AMVR enablement indicator indicates AMVR is enabled for the video sequence, determining that the affine mode AMVR enablement indicator is present in the parameter set associated with the video sequence., and,

~~12. The method of claim 10, further comprising,~~ on a condition that the value of the AMVR enablement indicator indicates AMVR is disabled for the video sequence, determining that the affine mode AMVR enablement indicator is not present in the parameter set associated with the video sequence.

~~13. The method of claim 10, further comprising obtaining the affine mode AMVR enablement indicator in response to a determination that the affine mode AMVR enablement indicator is present in the parameter set associated with the video sequence.~~

~~14. The method of claim 10, further comprising setting a value of the affine mode AMVR enablement indicator to a value indicative of disabling AMVR for the video sequence with the affine mode enabled in response to a determination that the affine mode AMVR enablement indicator is not present in the parameter set associated with the video sequence.~~

~~15~~7. The video decoding method of claim ~~10~~5, further comprising:

setting the value of the AMVR enablement indicator to a value indicative of disabling AMVR for the video sequence based on general constraint information (GCI); and

determining that the affine mode AMVR enablement indicator is not present in the parameter set associated with the video sequence based on the value of the AMVR enablement indicator indicative of disabling AMVR for the video sequence.

~~16~~8. The video decoding method of claim ~~10~~5, further comprising:

determining that intra-block copy (IBC) is enabled for the video sequence; and

obtaining an affine mode IBC enablement indicator in response to the determination that IBC is enabled for the video sequence, wherein the video sequence is decoded based on the affine mode IBC enablement indicator.

~~17. The method of claim 10, further comprising:~~

~~in response to the affine mode AMVR enablement indicator indicating enabling AMVR for the video sequence with the affine mode enabled, adaptively determining a precision of a motion vector difference associated with a coding block of the video sequence based on a coding mode associated with the coding block.~~

~~18~~9. A ~~method~~video encoding apparatus ~~for video processing~~, comprising one or more processors, wherein the one or more processors are configured to:

determin~~e~~ing that an affine mode is enabled for a video sequence;

determin~~e~~ing, based on a value of an adaptive motion vector difference resolution (AMVR) enablement indicator, whether to include an affine mode AMVR enablement indicator in a parameter set associated with the video sequence; and

generat~~e~~ing the parameter set associated with the video sequence based on the determination of whether to include the affine mode AMVR enablement indicator in the parameter set associated with the video sequence.

10. The video encoding apparatus of claim 9, further comprising, on a condition that the value of the AMVR enablement indicator indicates AMVR is enabled for the video sequence, determining that the affine mode AMVR enablement indicator is present in the parameter set associated with the video sequence, and, on a condition that the value of the AMVR enablement indicator indicates AMVR is disabled for the video sequence, determining that the affine mode AMVR enablement indicator is not present in the parameter set associated with the video sequence.

11. The video encoding apparatus of claim 9, further comprising:

determining that intra-block copy (IBC) is enabled for the video sequence; and

obtaining an affine mode IBC enablement indicator in response to the determination that IBC is enabled for the video sequence, wherein the video sequence is decoded based on the affine mode IBC enablement indicator.

12. A video encoding method, comprising:

determining that an affine mode is enabled for a video sequence;

determining, based on a value of an adaptive motion vector difference resolution (AMVR) enablement indicator, whether to include an affine mode AMVR enablement indicator in a parameter set associated with the video sequence; and

generating the parameter set associated with the video sequence based on the determination of whether to include the affine mode AMVR enablement indicator in the parameter set associated with the video sequence.

13. The video encoding method of claim 12, further comprising, on a condition that the value of the AMVR enablement indicator indicates AMVR is enabled for the video sequence, determining that the affine mode AMVR enablement indicator is present in the parameter set associated with the video sequence, and, on a condition that the value of the AMVR enablement indicator indicates AMVR is disabled for the video sequence, determining that the affine mode AMVR enablement indicator is not present in the parameter set associated with the video sequence.

14. The video encoding method of claim 12, further comprising:

determining that intra-block copy (IBC) is enabled for the video sequence; and

obtaining an affine mode IBC enablement indicator in response to the determination that IBC is enabled for the video sequence, wherein the video sequence is decoded based on the affine mode IBC enablement indicator.

~~19. The apparatus of any one of claims 1-8 or the method of any one of claims 10-17, wherein the determination that affine mode is enabled for the video sequence is based on a value of an affine mode enablement indicator, and the determination of whether the affine mode AMVR enablement indicator is present in the parameter set is in response to the determination that affine mode is enabled for the video sequence based on the value of the affine mode enablement indicator.~~

~~20. The apparatus of any one of claims 1-9 and 19 or the method of any one of claims 10-19, wherein the AMVR enablement indicator is in the parameter set associated with the video sequence.~~

~~21. The apparatus of any one of claims 1-9, 19 and 20 or the method of any one of claims 10-20, wherein the affine mode AMVR enablement indicator indicates whether a combination of the affine mode and AMVR is enabled for the video sequence.~~

~~22. The apparatus of any one of claims 1-9 and 19-21 or the method of any one of claims 10-21, wherein the parameter set associated with the video sequence comprises a SPS associated with the video sequence.~~

~~23. A non-transitory computer readable medium containing data content generated according to the method of any one of claims 10-22.~~

~~24~~15. A computer readable medium including instructions for causing one or more processors to perform the method of any one of claims ~~10-22~~5-8 and 12-14.

~~25. A computer program product comprising instructions for performing the method of any one of claims 10-22 when executed by one or more processors.~~

~~26. A device comprising:~~

~~an apparatus according to any one of claims 1-9 and 19-21; and~~

~~at least one of (i) an antenna configured to receive a signal, the signal including data representative of an image, (ii) a band limiter configured to limit the received signal to a band of frequencies that includes the data representative of the image, or (iii) a display configured to display the image.~~

~~27. A device according to any one of claims 1-9 and 19-21, comprising:~~

~~a TV, a cell phone, a tablet, or a set-top box (STB).~~

~~28. A signal comprising the parameter set associated with the video sequence according to the method of any one of claims 10-22.~~

~~29. An apparatus comprising:~~

~~an accessing unit configured to access data including the parameter set associated with the video sequence according to the method of any one of claims 10-22; and~~

~~a transmitter configured to transmit the data including the parameter set.~~

~~30. A method comprising:~~

~~accessing data including the parameter set associated with the video sequence according to the method of any one of claims 10-22; and~~

~~transmitting the data including the parameter set.~~