CLAIMS

1. A method of decoding performed in a decoder, the method comprising:

receiving coded information of a block from a coded video bitstream, the coded information indicating that the block is partitioned based on a geometry partition mode (GPM) into a first part and a second part and inter predicted based on merge mode with motion vector difference (MMVD), the GPM including a plurality of angle indexes and a plurality of edge indexes, the plurality of angle indexes indicating angles and the plurality of edge indexes indicating edge positions that are relative to a center of the block, the MMVD including a plurality of distance indexes and a plurality of direction indexes, the plurality of distance indexes indicating distances and the plurality of direction indexes indicating directions with respect to a starting motion vector;

determining that a motion vector for the first part of the block partitioned by GPM is not identical to a motion vector for the second part of the block partitioned by GPM;

reconstructing the block based on the motion vector for the first part of the block and the motion vector for the second part of the block responsive to the motion vector for the first part of the block partitioned by GPM being determined as not identical to the motion vector for the second part of the block partitioned by GPM;

determining (i) an offset value of the MMVD and a motion vector prediction of the GPM for the first part and (ii) an offset value of the MMVD and a motion vector prediction of the GPM for the second part of the block;

determining the motion vector for the first part of the block based on the offset value of the MMVD and the motion vector prediction of the GPM for the first part of the block; and

determining the motion vector for the second part of the block based on (i) the offset value of the MMVD and the motion vector prediction of the GPM for the second part of the block, and (ii) the motion vector for the first part of the block

characterized in that

the determining the motion vector for the second part of the block further comprises:

in response to a sum of the offset value of the MMVD for the second part of the block and the motion vector prediction of the GPM for the second part of the block being equal to the motion vector for the first part of the block,

determining a modified offset value of the MMVD based on a product of a modified second distance value and the second direction value for the second part of the block, the modified second distance value being obtained based on second distance index information plus one; and

determining the motion vector for the second part of the block to be equal to a sum of the modified offset value of the MMVD for the second part of the block and the motion vector prediction of the GPM for the second part of the block,

wherein the determining the offset value of the MMVD for the first part and the offset value of the MMVD for the second part further comprises:

determining the offset value of the MMVD for the first part of the block based on a product of a first distance value and a first direction value; and

determining the offset value of the MMVD for the second part of the block based on a product of a second distance value and a second direction value, wherein:

the first distance value is obtained based on first distance index information,

the first direction value is obtained based on first direction index information,

the second distance value is obtained based on the second distance index information and the motion vector for the first part of the block, and

the second direction value is obtained based on second direction index information.

2. The method of claim 1, wherein the determining the motion vector for the second part of the block further comprises:

determining the motion vector for the second part of the block to be equal to a sum of the offset value of the MMVD for the second part of the block and the motion vector prediction of the GPM for the second part of the block in response to the sum

of the offset value of the MMVD for the second part of the block and the motion vector prediction of the GPM for the second part of the block being not equal to the motion vector for the first part of the block.

3. An apparatus for video decoding, comprising:
processing circuitry configured to perform the method according to claim 1 or 2.

4. A non-transitory computer-readable storage medium storing computer program code, the computer program code, when executed by at least one processor, the at least one processor is configured to perform the method according to claim 1 or 2.