CLAIMS

What is claimed is:

1. A picture prediction method, comprising:

determining whether a merge mode is used for a current picture block;

when it is determined that a merge mode is used for the current picture block, determining whether a third merge mode is available as a target merge mode applicable to the current picture block; and

when it is determined that no third merge mode is available as a target merge mode applicable to the current picture block, and a first sequence level syntax element corresponding to a first merge mode indicates that the first merge mode is forbidden to be used, determining a second merge mode as the target merge mode applicable to the current picture block; and

predicting the current picture block based on the target merge mode;

wherein the first merge mode is a triangle partition mode, TPM, that splits the current picture block into two triangle prediction units,

the second merge mode is a combined intra and inter prediction, CIIP, mode, and

the third merge mode includes a regular merge mode, a merge with motion vector difference, MMVD mode, and a subblock merge mode.

2. The method according to claim 1, wherein the method further comprises:

when it is determined that no third merge mode is available as the target merge mode applicable to the current picture block, and the first sequence level syntax element corresponding to the first merge mode indicates that the first merge mode is allowed to be used, determining the target merge mode based on a second sequence level syntax element corresponding to the second merge mode and/or available status information of the second merge mode, wherein the available status information of the second merge mode is used to indicate whether the second merge mode is used when the current picture block is predicted, wherein the available status information of the second merge mode is a value of a ciip_flag.

3. The method according to claim 2, wherein the determining the target merge mode based on a second sequence level syntax element corresponding to the second merge mode and/or

available status information of the second merge mode comprises:

when it is determined that the second sequence level syntax element corresponding to the second merge mode and/or the available status information of the second merge mode indicate/indicates that the second merge mode is forbidden to be used, determining the first merge mode as the target merge mode.

4. The method according to any one of claims 1 to 3, wherein before the determining the target merge mode based on a second sequence syntax element corresponding to the second merge mode and/or available status information of the second merge mode, the method further comprises:

determining that a type of a slice or slice group in which the current picture block is located is B; and

determining that a maximum quantity of the first merge mode candidates supported by the slice or slice group in which the current picture block is located is greater than or equal to 2.

5. The method according to claim 1, wherein the method further comprises:

when it is determined that no third merge mode is available as the target merge mode applicable to the current picture block, and the first sequence level syntax element corresponding to the first merge mode indicates that the first merge mode is allowed to be used, but the current picture block does not meet at least one of a condition A and a condition B, determining the second merge mode as the target merge mode, wherein the condition A is that a type of a slice in which the current picture block is located is B, and the condition B is that a maximum quantity of the first merge mode candidates supported by the slice or slice group in which the current picture block is located is greater than or equal to 2.

6. The method according to any one of claims 1 to 5, wherein the prediction method is applied to an encoder side, to encode the current picture block.

7. The method according to any one of claims 1 to 5, wherein the prediction method is applied to a decoder side, to decode the current picture block.

8. A picture prediction apparatus, comprising:

a memory, configured to store a program; and

a processor, configured to execute the program stored in the memory, wherein when the program stored in the memory is executed by the processor, the processor performs the method according to any one of claims 1 to 7.

9. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program that can be executed by a processor, and when the computer program is executed by the processor, the processor performs the method according to any one of claims 1 to 7.

10. A program comprising program code for performing the method according to any one of claims 1 to 7.