CLAIMS

1. A method comprising:

receiving a bitstream comprising an encoded first video picture, an encoded second video picture, and an encoded order value relating said second video picture to said first video picture, the order value encoded in a slice header that is associated with the second video picture; and

calculating a first motion vector for decoding the second video picture by using said order value.

2. The method of claim 1, wherein calculating the first motion vector comprises using said order value to perform an interpolation operation on a second motion vector.

3. The method of claim 1, wherein the first video picture is for decoding before the second video picture.

4. The method of claim 1, wherein said encoded order value is compressed in the bitstream.

5. The method of claim 4, wherein said compressed order value is compressed in the bitstream by variable length coding.

6. The method of claim 4, wherein said compressed order value is compressed in the bitstream by arithmetic coding.

7. The method of claim 1, wherein said order value comprises an integer.

8. A method comprising:

receiving a bitstream;

extracting an encoded first video picture, an encoded second video picture, and more than one instance of an encoded order value for the second video picture from the

bitstream, the order value for specifying a relationship between the second video picture and the first video picture and for computing a motion vector for decoding the second video picture.

9. The method of claim 8, wherein the encoded order value is compressed in the bitstream.

10. The method of claim 9, wherein the encoded order value is compressed in the bitstream by using variable length coding.

11. The method of claim 9, wherein said encoded order value is compressed in said bitstream by using arithmetic coding.

12. The method of claim 8, wherein an order value is representative of a positional relationship of a video picture with respect to another video picture.

13. A method for decoding a video picture in a sequence of video pictures, the method comprising:

receiving an encoded first video picture, an encoded second video picture and an integer value;

deriving an order value for the second video picture by using the received integer value as an exponent of a power of two value, the order value representative of a position of the second video picture with reference to the first video picture in the sequence of video pictures; and

by a decoder, decoding the second video picture by using the order value to calculate a motion vector for the second video picture.

14. The method of claim 13 further comprising receiving a slice header associated with the second video picture, wherein the slice header comprises an encoded value that is based on the order value.

15. The method of claim 13, wherein the encoded second video picture comprises at least one macroblock that references the first video picture.

16. The method of claim 13 further comprising calculating another motion vector for the second video picture by using said order value.

17. The method of claim 13, wherein calculating the motion vector for the second video picture comprises performing an interpolation operation based on a motion vector for a third video picture.

18. The method of claim 13 further comprising displaying the second video picture according to the order value.

19. The method of claim 13, wherein the order value is a power of two integer.

20. The method of claim 13, wherein the position of the second video picture with reference to the first video picture is a temporal position.

21. The method of claim 13, wherein the first video picture is an I-picture that comprises no macroblocks that reference other video pictures.

22. A computer readable medium storing a computer program that is executable by at least one processor, the computer program comprising sets of instructions for implementing the method according to any one of claims 1-21.

23. A computer system comprising means for implementing steps according to any one of claims 1-21.

## CLAIMS

1. A method comprising:

receiving a bitstream comprising an encoded first video picture, an encoded second video picture, and an encoded order value relating said second video picture to said first video picture, the order value encoded in a slice header that is associated with the second video picture; and

calculating a first motion vector for decoding the second video picture by using said order value.

2. The method of claim 1, wherein calculating the first motion vector comprises using said order value to perform an interpolation operation based on a second motion vector.

3. The method of claim 1, wherein the first video picture is decoded before the second video picture.

4. The method of claim 1, wherein said encoded order value is compressed in the bitstream.

5. The method of claim 4, wherein said compressed order value is compressed in the bitstream by variable length coding.

6. The method of claim 4, wherein said compressed order value is compressed in the bitstream by arithmetic coding.

7. The method of claim 1, wherein said order value comprises an integer that specifies a display order for the second video picture in a sequence of video pictures.

8. A method comprising:

receiving a bitstream;

extracting an encoded first video picture, an encoded second video picture, and more than one instance of an encoded order value for the second video picture from the bitstream, the order value for specifying a relationship between the second video picture and the first video picture and for computing a motion vector for decoding the second video picture.

9. The method of claim 8, wherein the encoded order value is compressed in the bitstream.

10. The method of claim 9, wherein the encoded order value is compressed in the bitstream by using variable length coding.

11. The method of claim 9, wherein said encoded order value is compressed in said bitstream by using arithmetic coding.

12. The method of claim 8, wherein an order value specifies a display order for the second video picture in a sequence of video pictures.

13. A method for decoding a video picture in a sequence of video pictures, the method comprising:

receiving an encoded first video picture, an encoded second video picture and an integer value;

deriving an order value for the second video picture by using the received integer value as an exponent of a power of two value, the order value representative of a position of the second video picture with reference to the first video picture in the sequence of video pictures; and

by a decoder, decoding the second video picture by using the order value to calculate a motion vector for the second video picture.

14. The method of claim 13 further comprising receiving a slice header associated with the second video picture, wherein the slice header comprises an encoded value that is based on the order value.

15. The method of claim 13, wherein the encoded second video picture comprises at least one macroblock that references the first video picture.

16. The method of claim 13 further comprising calculating another motion vector for the second video picture by using said order value.

17. The method of claim 13, wherein calculating the motion vector for the second video picture comprises performing an interpolation operation based on a motion vector for a third video picture.

18. The method of claim 13 further comprising displaying the second video picture according to the order value.

19. The method of claim 13, wherein the order value is a power of two integer.

20. The method of claim 13, wherein the position of the second video picture with reference to the first video picture is a temporal position.

21. The method of claim 13, wherein the first video picture is an I-picture that comprises no macroblocks that reference other video pictures.

22. A computer readable medium storing a computer program that is executable by at least one processor, the computer program comprising sets of instructions for implementing the method according to any one of claims 1-21.

23. A computer system comprising means for implementing steps according to any one of claims 1-21.