WHAT IS CLAIMED IS:

1. A decoder~~, the decoder comprising circuitry~~ configured to:

receive a bitstream comprising a reference ~~frame;~~

~~determine, for~~picture, a current ~~block, a scaling constant;~~

~~determine~~picture having a ~~scaled~~ resolution different from the reference ~~block using the reference frame~~picture and ~~the~~including a first block and a second block, and information useful for determining a scaling constant;

determine a scaling constant using the information in the bitstream;

determine a scaled prediction block ~~using~~from the ~~scaled~~ reference ~~block; and~~picture by:

~~reconstruct pixel data of the current block and using the rescaled prediction block.~~

~~2. The decoder of claim 1, further configured to determine the~~ determining a location of the scaled prediction block by ~~determining scaled motion information.~~

~~3. The decoder of claim 2, wherein the scaled motion information is determined by at least multiplying a horizontal component of~~ scaling a motion vector ~~by~~component using the scaling constant; and ~~multiplying a vertical component of the motion vector by the scaling constant.~~

~~4~~scaling the resolution of a block of the reference picture using the scaling constant and applying a filter determined specifically for the prediction block and not determined for the whole reference picture;

reconstruct the first block using the scaled prediction block; and

reconstruct the second block without using a scaled prediction block.

2. The decoder of claim 1~~, further configured to determine the scaled reference block by~~ wherein, the information in the bitstream useful for determining a ~~position of the scaled reference block.~~

~~5. The decoder of claim 4, wherein the position is determined by multiplying a horizontal component of a position of a reference block by the scaling factor and multiplying a vertical component of the position of the reference block by the scaling factor.~~

6. The decoder of claim 1, further configured to:

receive a bit stream; and

determine, from the bit stream, the scaling constant, wherein the scaling constant is signaled within the bit stream.

7. The decoder of claim 6, wherein the bit streamscaling constant includes an index to a set of predetermined scaling constant.

8. The decoder of claim 1, further configured to receive the reference frame by accessing the reference frame from memory.

9. The decoder of claim 1, further comprising:

an entropy decoder processor configured to receive a bit streamvalues and decode the bit stream into quantized coefficients;said index is utilized to determine the scaling constant.

an inverse quantization and inverse transformation processor

3. A decoder configured to process the quantized coefficients:

receive a bit stream including performing an inverse discrete cosine;

a deblocking filter;

a frame buffer; and

an intra prediction processor.

10. The decoder of claim 1, wherein the current block is a coding tree unit.

11. The decoder of claim 1, wherein the current block is a coding unit.

12. The decoder of claim 1, wherein the current block is a prediction unit.

13. A methodcoded picture comprising: a first plurality of coded blocks and a second plurality of coded blocks;

receiving a reference frame;

decode each block of the first plurality of coded blocks by:

determining, for a current block, a scaling constant; using information in the bitstream; and

determining a scaled reference block using the reference frame and the scaling constant;

determining a scaled prediction block using the scaled reference block; and

reconstructing pixel data of the current block and using the rescaled from a reference picture having a different resolution than the current coded picture, by scaling a

motion vector component to determine the location of the scaled prediction block.

14. The method of claim 13, wherein determining the scaled prediction block includes determining scaled motion information.

15. The method of claim 14, wherein the scaled motion information is determined by multiplying a horizontal component of a motion vector by, scaling a block from the reference picture using the scaling constant, and multiplyingapplying a vertical component offilter determined individually for the motion vector by the scaling constant.prediction block;

16. The method of claim 13, wherein determining the scaled reference block includes determining a position of the scaled reference block.

17. The method of claim 16, wherein the position is determined by multiplying a horizontal component of a position of a reference block by the scaling factor and multiplying a vertical component of the position of the reference block by the scaling factor.

18. The method of claim 13, further comprising:

receiving a bit stream; and

determining, from the bit stream, the scaling constant, wherein the scaling constant is signaled within the bit stream.

19. The method of claim 18, wherein the bit streamdecoding each block of the first plurality of coded blocks using its scaled prediction block; and

decode each block of the second plurality of coded blocks without using a scaled prediction block of a reference picture and without applying a resolution changing filter specifically determined for a block of a reference picture.

4. The decoder of claim 3 wherein, the information in the bitstream includes an index to a set of predetermined scaling constant.

20. The method of claim 13, wherein receiving the reference frame includes accessing the reference frame from memory.

21. The method of claim 13, wherein at least one of the receiving, the determining,values and the reconstructing is performed by a decoder, the decoder comprising:

an entropy decoder processor configuredsaid index is utilized to receive a bit stream and decode the bit stream into quantized coefficients;

~~an inverse quantization and inverse transformation processor configured to process the quantized coefficients including performing an inverse discrete cosine;~~

~~a deblocking filter;~~

~~a frame buffer; and~~

~~an intra prediction processor.~~

~~22. The method of claim 13, wherein the current block is a coding tree unit.~~

~~23. The method of claim 13, wherein the current block is a coding unit.~~

~~24. The method of claim 13, wherein the current block is a prediction unit.~~

determine the scaling constant.