

WHAT IS CLAIMED IS:

1. A decoder, the decoder comprising circuitry configured to:
receive a reference frame;
5 determine, for a current block, a scaling constant;
determine a scaled reference block using the reference frame and the scaling constant;
determine a scaled prediction block using the scaled reference block; and
reconstruct pixel data of the current block and using the rescaled prediction block.
2. The decoder of claim 1, further configured to determine the scaled prediction block by
10 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 a motion vector by the scaling constant and
multiplying a vertical component of the motion vector by the scaling constant.
4. The decoder of claim 1, further configured to determine the scaled reference block by
15 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:
20 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 stream includes an index to a predetermined
scaling constant.
- 25 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 stream and decode the bit stream
into quantized coefficients;
30 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.
10. The decoder of claim 1, wherein the current block is a coding tree unit.
- 5 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 method comprising:
receiving a reference frame;
determining, for a current block, a scaling constant;
10 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 prediction block.
14. The method of claim 13, wherein determining the scaled prediction block includes
determining scaled motion information.
- 15 15. The method of claim 14, wherein the scaled motion information is determined by
multiplying a horizontal component of a motion vector by the scaling constant and
multiplying a vertical component of the motion vector by the scaling constant.
16. The method of claim 13, wherein determining the scaled reference block includes
determining a position of the scaled reference block.
- 20 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
25 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 stream includes an index to a predetermined
scaling constant.
20. The method of claim 13, wherein receiving the reference frame includes accessing the
30 reference frame from memory.

21. The method of claim 13, wherein at least one of the receiving, the determining, and the reconstructing is performed by a decoder, the decoder comprising:
an entropy decoder processor configured to receive a bit stream and decode the bit stream
into quantized coefficients;
5 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.
- 10 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.