

CLAIMS

What is Claimed:

1. An apparatus comprising:
a processor configured to:
 - determine that intra sub-partitions (ISP) is enabled for a current block;
 - determine a sub-partition width for the current block;
 - for a sub-partition in the current block, determine a corresponding prediction block based on the sub-partition width and a minimum prediction block width;
 - determine reference samples of the prediction block; and
 - predict the prediction block using the reference samples.
2. A method comprising:
 - determining that intra sub-partitions (ISP) is enabled for a current block;
 - determining a sub-partition width for the current block;
 - for a sub-partition in the current block, determining a corresponding prediction block based on the sub-partition width and a minimum prediction block width;
 - determining reference samples; and
 - predicting the prediction block using the reference samples.
3. The apparatus of claim 1 or the method of claim 2, wherein the minimum prediction block width is 4 samples.
4. The apparatus of claim 1 or the method of claim 2, wherein the prediction block comprises a plurality of transform block sub-partitions when a current block width is 4 samples and a current block height is 8 samples or greater, or when the current block width is 8 samples and the current block height is 8 samples or greater.
5. The apparatus of claim 1 or the method of claim 2, wherein the prediction block is predicted using neighboring samples of the current block when the current block is vertically split, a current block width is 4 samples, and a current block height is 8 samples or greater.
6. The apparatus of claim 1 or the method of claim 2, wherein the prediction block is predicted using neighboring samples of the current block and samples from a reconstructed sub-partition in the current block.

7. The apparatus of claim 1 or the method of claim 2, wherein the prediction block is predicted using neighboring samples of the current block and samples from a reconstructed sub-partition in the current block when a current block width is 8 samples and a current block height is 8 samples or greater.
8. The apparatus of claim 1 or the method of claim 2, wherein the sub-partition width for the current block is determined based at least in part on whether a type of the ISP for the current block is a vertical split type or horizontal split type.
9. The apparatus of claim 1 or the method of claim 2, wherein the prediction block comprises a transport block, the transport block comprises the sub-partition, and the sub-partition width is a width of the transport block.
10. The apparatus of any one of claims 1 and 3-9, wherein the apparatus comprises at least one of a decoding device for decoding a part of an image, or an encoding device for encoding a part of an image.
11. The method of any one of claims 2-9, wherein the method is performed by a decoder or an encoder.
12. A computer readable medium including instructions for causing one or more processors to perform the method of any one of claims 2-9.
13. A device comprising:
 - the apparatus according to any one of claims 1 and 3-9; and
 - at least one of (i) an antenna configured to receive a signal, the signal including data representative of an image, (ii) a band limiter configured to limit the received signal to a band of frequencies that includes the data representative of the image, or (iii) a display configured to display the image.
14. A device according to any one of claims 1 and 3-9, comprising:
 - a TV, a cell phone, a tablet, or a set-top box (STB).
15. A signal comprising a residual that is generated using the prediction block according to the method of any one of claims 2-9.