

Amended Set of Claims 1 to 37

1. A method of coding video data, the method comprising:
determining that a slice of a picture of video data begins in a row of coding tree units (CTUs) in the picture at a position other than a beginning of the row, wherein the row spans a width of the picture, wherein the beginning of the row corresponds to a left edge of the picture, and wherein an end of the row corresponds to a right edge of the picture;
based on the determination, determining that the slice ends within the row of CTUs; and
coding the slice based on the determination that the slice ends within the row of CTUs.
2. The method of claim 1, further comprising coding all slices of all pictures of the video data such that all of the slices that begin at a position other than a beginning of a corresponding row of CTUs also end within the corresponding row of CTUs.
3. The method of claim 1, wherein coding the slice comprises coding the slice using wavefront parallel processing.
4. The method of claim 3, wherein coding the slice using wavefront parallel processing further comprises determining that wavefront parallel processing is enabled.
5. The method of claim 3, further comprising enabling wavefront parallel processing.
6. The method of claim 5, further comprising coding syntax data indicating that wavefront parallel processing is enabled.
7. The method of claim 3, wherein coding the slice comprises coding at least a portion of a picture that includes the slice using wavefront parallel processing.

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8. The method of claim 1, further comprising determining that the slice ends either at an end of the row of CTUs or before the end of the row of CTUs.
9. The method of claim 1, wherein coding the slice comprises coding CTUs of the slice in raster scan order without crossing to a subsequent row of CTUs in the picture before reaching the end of the slice.
10. The method of claim 1,
wherein the row of CTUs comprises a first row of CTUs, the method further comprising coding an adjacent row of CTUs to the first row of CTUs substantially in parallel with coding the first row of CTUs.
11. The method of claim 10, wherein the adjacent row of CTUs comprises a second row of CTUs positioned below the first row of CTUs.
12. The method of claim 10, wherein the adjacent row of CTUs comprises a second row of CTUs positioned above the first row of CTUs.
13. The method of claim 1, wherein coding the slice comprises entropy decoding the slice based on the determination that the slice ends within the row of CTUs.
14. The method of claim 1, wherein coding the slice comprises entropy encoding the slice based on the determination that the slice ends within the row of CTUs.
15. A device for coding video data, the device comprising a video coder configured to:
determine that a slice of a picture of video data begins in a row of coding tree units (CTUs) in the picture at a position other than a beginning of the row, wherein the row spans a width of the picture, wherein the beginning of the row corresponds to a left edge of the picture, and wherein an end of the row corresponds to a right edge of the picture;

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based on the determination, determine that the slice ends within the row of CTUs; and

code the slice based on the determination that the slice ends within the row of CTUs.

16. The device of claim 15, wherein the device comprises at least one of:
an integrated circuit;
a microprocessor; and
a communication device that comprises the video coder.

17. The device of claim 15, wherein the video coder is further configured to code all slices of all pictures of the video data such that all of the slices that begin at a position other than a beginning of a corresponding row of CTUs also end within the corresponding row of CTUs.

18. The device of claim 15, wherein the video coder is configured to code the slice using wavefront parallel processing.

19. The device of claim 18, wherein the video coder is configured to code the slice using wavefront parallel processing at least in part by determining that wavefront parallel processing is enabled on the device.

20. The device of claim 18, wherein the video coder is further configured to enable wavefront parallel processing on the device.

21. The device of claim 15, wherein the video coder is further configured to determine that the slice ends either at an end of the row of CTUs or before the end of the row of CTUs.

22. The device of claim 15, wherein the video coder is configured to code the slice at least in part by coding CTUs of the slice in raster scan order without crossing to a subsequent row of CTUs in the picture before reaching the end of the slice.

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23. The device of claim 15, wherein the row of CTUs comprises a first row of CTUs, and wherein the video coder is further configured to:

code an adjacent row of CTUs to the first slice substantially in parallel with coding the first row of CTUs.

24. The device of claim 23, wherein the adjacent row of CTUs comprises a second row of CTUs positioned below the first row of CTUs.

25. The device of claim 23, wherein the adjacent row of CTUs comprises a second row of CTUs positioned above the first row of CTUs.

26. The device of claim 15, wherein the video coder comprises a video decoder configured to entropy decode the slice based on the determination that the slice ends within the row of CTUs.

27. The device of claim 15, wherein the video coder comprises a video encoder configured to entropy encode the slice based on the determination that the slice ends within the row of CTUs.

28. A device for coding video data, the device comprising:
means for determining that a slice of a picture of video data begins in a row of coding tree units (CTUs) in the picture at a position other than a beginning of the row, wherein the row spans a width of the picture, wherein the beginning of the row corresponds to a left edge of the picture, and wherein an end of the row corresponds to a right edge of the picture;
means for determining, based on the determination, that the slice ends within the row of CTUs; and
means for coding the slice based on the determination that the slice ends within the row of CTUs.

29. The device of claim 28, further comprising means for coding all slices of all pictures of the video data such that all of the slices that begin at a position other than a beginning of a corresponding row of CTUs also end within the corresponding row of CTUs.

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30. The device of claim 28, wherein the means coding the slice comprises means for coding the slice using wavefront parallel processing.

31. The device of claim 28, wherein the means for coding the slice comprises means for coding CTUs of the slice in raster scan order without crossing to a subsequent row of CTUs in the picture before reaching the end of the slice.

32. The device of claim 28, wherein the slice comprises a first slice, the device further comprising means for coding an adjacent row of CTUs to the first row of CTUs substantially in parallel with coding the first row of CTUs.

33. A computer-readable storage medium having stored thereon instructions that, when executed, cause a programmable processor of a computing device to:

determine that a slice of a picture of video data begins in a row of coding tree units (CTUs) in the picture at a position other than a beginning of the row, wherein the row spans a width of the picture, wherein the beginning of the row corresponds to a left edge of the picture, and wherein an end of the row corresponds to a right edge of the picture;

based on the determination, determine that the slice ends within the row of CTUs; and

code the slice based on the determination that the slice ends within the row of CTUs.

34. The computer-readable storage medium of claim 33, wherein the instructions, when executed, further cause the programmable processor of the computing device to code all slices of all pictures of the video data such that all of the slices that begin at a position other than a beginning of a corresponding row of CTUs also end within the corresponding row of CTUs.

35. The computer-readable storage medium of claim 33, wherein the instructions, when executed, further cause the programmable processor of the computing device to code the slice using wavefront parallel processing.

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36. The computer-readable storage medium of claim 33, wherein the instructions, when executed, further cause the programmable processor of the computing device to code the slice at least in part by coding CTUs of the slice in raster scan order without crossing to a subsequent row of CTUs in the picture before reaching the end of the slice.

37. The computer-readable storage medium of claim 33, wherein the row of CTUs is a first row of CTUs, and wherein the instructions, when executed, further cause the programmable processor of the computing device to code an adjacent row of CTUs to the first row of CTUs substantially in parallel with coding the first row of CTUs.

CLAIMS

1. An invention not claimed in any divisional application.