WHAT IS CLAIMED IS:

1. A method of encoding video data comprising:

determining a first prediction type for a block of video data in a P slice;

representing the first prediction type as a P-slice prediction type syntax element;

determining a second prediction type for a block of video data in a B slice;

representing the second prediction type as a B-slice prediction type syntax element;

determining a P-slice binarization for the P-slice prediction type syntax element;

determining a B-slice binarization for the B-slice prediction type syntax element, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element are determined using the same binarization logic; and

encoding the video data based on the binarizations of the P-slice prediction type syntax element and the B-slice prediction syntax element.

2. The method of claim 1, wherein encoding the video data comprises:

binarizing the P-slice prediction type syntax element with the determined P-slice binarization;

binarizing the B-slice prediction type syntax element with the determined B-slice binarization;

applying context adaptive binary arithmetic coding (CABAC) to the binarized P-slice prediction type syntax element; and

applying context adaptive binary arithmetic coding (CABAC) to the binarized B-slice prediction type syntax element.

3. The method of claim 1, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

4. The method of claim 3, wherein the prediction mode includes one of inter-prediction and intra-prediction.

5. The method of claim 3, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

6. A method of decoding video data comprising:

mapping a binarized P-slice prediction type syntax element to a prediction type using a binarization mapping for a block of video data in a P slice;

mapping a binarized B-slice prediction type syntax element to a prediction type using the same binarization mapping for a block of video data in a B slice; and

decoding the video data based on the mapped prediction types.

7. The method of claim 6, further comprising:

receiving a context adaptive binary arithmetic coded P-slice prediction type syntax element which indicates the prediction type for the block of video data in a P slice; and

receiving a context adaptive binary arithmetic coded B-slice prediction type syntax element which indicates the prediction type for the block of video data in a B slice,

wherein decoding the video data further comprises:

decoding the P-slice prediction type syntax element to produce the binarized P-slice prediction type syntax element; and

decoding the B-slice prediction type syntax element to produce the binarized B-slice prediction type syntax element.

8. The method of claim 6, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

9. The method of claim 8, wherein the prediction mode includes one of inter-prediction and intra-prediction.

10. The method of claim 8, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

11. An apparatus configured to encode video data comprising:

means for determining a first prediction type for a block of video data in a P slice;

means for representing the first prediction type as a P-slice prediction type syntax element;

means for determining a second prediction type for a block of video data in a B slice;

means for representing the second prediction type as a B-slice prediction type syntax element;

means for determining a P-slice binarization for the P-slice prediction type syntax element;

means for determining a B-slice binarization for the B-slice prediction type syntax element, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element are determined using the same binarization logic; and

means for encoding the video data based on the binarizations of the P-slice prediction type syntax element and the B-slice prediction syntax element.

12. The apparatus of claim 11, wherein the means for encoding the video data comprises:

means for binarizing the P-slice prediction type syntax element with the determined P-slice binarization;

means for binarizing the B-slice prediction type syntax element with the determined B-slice binarization;

means for applying context adaptive binary arithmetic coding (CABAC) to the binarized P-slice prediction type syntax element; and

means for applying context adaptive binary arithmetic coding (CABAC) to the binarized B-slice prediction type syntax element.

13. The apparatus of claim 11, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

14. The apparatus of claim 13, wherein the prediction mode includes one of inter-prediction and intra-prediction.

15. The apparatus of claim 13, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

16. An apparatus configured to decode video data comprising:

means for mapping a binarized P-slice prediction type syntax element to a prediction type using a binarization mapping for a block of video data in a P slice;

means for mapping a binarized B-slice prediction type syntax element to a prediction type using the same binarization mapping for a block of video data in a B slice; and

means for decoding the video data based on the mapped prediction types.

17. The apparatus of claim 16, further comprising:

means for receiving a context adaptive binary arithmetic coded P-slice prediction type syntax element which indicates the prediction type for the block of video data in a P slice; and

means for receiving a context adaptive binary arithmetic coded B-slice prediction type syntax element which indicates the prediction type for the block of video data in a B slice,

wherein the means for decoding the video data further comprises:

means for decoding the P-slice prediction type syntax element to produce the binarized P-slice prediction type syntax element; and

means for decoding the B-slice prediction type syntax element to produce the binarized B-slice prediction type syntax element.

18. The apparatus of claim 16, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

19. The apparatus of claim 18, wherein the prediction mode includes one of inter-prediction and intra-prediction.

20. The apparatus of claim 18, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

21. An apparatus configured to encode video data comprising:

a video encoder configured to:

determine a first prediction type for a block of video data in a P slice;

represent the first prediction type as a P-slice prediction type syntax element;

determine a second prediction type for a block of video data in a B slice;

represent the second prediction type as a B-slice prediction type syntax element;

determine a P-slice binarization for the P-slice prediction type syntax element;

determine a B-slice binarization for the B-slice prediction type syntax element, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element are determined using the same binarization logic; and

encode the video data based on the binarizations of the P-slice prediction type syntax element and the B-slice prediction syntax element.

22. The apparatus of claim 21, wherein the video encoder is further configured to:

binarize the P-slice prediction type syntax element with the determined P-slice binarization;

binarize the B-slice prediction type syntax element with the determined B-slice binarization;

apply context adaptive binary arithmetic coding (CABAC) to the binarized P-slice prediction type syntax element; and

apply context adaptive binary arithmetic coding (CABAC) to the binarized B-slice prediction type syntax element.

23. The apparatus of claim 21, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

24. The apparatus of claim 23, wherein the prediction mode includes one of inter-prediction and intra-prediction.

25. The apparatus of claim 23, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

26. An apparatus configured to decode video data comprising:

a video decoder configured to:

map a binarized P-slice prediction type syntax element to a prediction type using a binarization mapping for a block of video data in a P slice;

map a binarized B-slice prediction type syntax element to a prediction type using the same binarization mapping for a block of video data in a B slice; and

decode the video data based on the mapped prediction types.

27. The apparatus of claim 26, wherein the video decoder is further configured to:

receive a context adaptive binary arithmetic coded P-slice prediction type syntax element which indicates the prediction type for the block of video data in a P slice;

receive a context adaptive binary arithmetic coded B-slice prediction type syntax element which indicates the prediction type for the block of video data in a B slice;

decode the P-slice prediction type syntax element to produce the binarized P-slice prediction type syntax element; and

decode the B-slice prediction type syntax element to produce the binarized B-slice prediction type syntax element.

28. The apparatus of claim 26, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

29. The apparatus of claim 28, wherein the prediction mode includes one of inter-prediction and intra-prediction.

30. The apparatus of claim 28, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

31. A computer-readable storage medium storing instructions that, when executed, cause one or more processors configured to encode video data to:

determine a first prediction type for a block of video data in a P slice;

represent the first prediction type as a P-slice prediction type syntax element;

determine a second prediction type for a block of video data in a B slice;

represent the second prediction type as a B-slice prediction type syntax element;

determine a P-slice binarization for the P-slice prediction type syntax element;

determine a B-slice binarization for the B-slice prediction type syntax element, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element are determined using the same binarization logic; and

encode the video data based on the binarizations of the P-slice prediction type syntax element and the B-slice prediction syntax element.

32. The computer-readable storage medium of claim 31, wherein the instructions further cause the one or more processors to:

binarize the P-slice prediction type syntax element with the determined P-slice binarization;

binarize the B-slice prediction type syntax element with the determined B-slice binarization;

apply context adaptive binary arithmetic coding (CABAC) to the binarized P-slice prediction type syntax element; and

apply context adaptive binary arithmetic coding (CABAC) to the binarized B-slice prediction type syntax element.

33. The computer-readable storage medium of claim 31, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

34. The computer-readable storage medium of claim 33, wherein the prediction mode includes one of inter-prediction and intra-prediction.

35. The computer-readable storage medium of claim 33, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

36. A computer-readable storage medium storing instructions that, when executed, cause one or more processors configured to decode video data to:

map a binarized P-slice prediction type syntax element to a prediction type using a binarization mapping for a block of video data in a P slice;

map a binarized B-slice prediction type syntax element to a prediction type using the same binarization mapping for a block of video data in a B slice; and

decode the video data based on the mapped prediction types.

37. The computer-readable storage medium of claims 36, wherein the instructions further cause the one or more processors to:

receive a context adaptive binary arithmetic coded P-slice prediction type syntax element which indicates the prediction type for the block of video data in a P slice;

receive a context adaptive binary arithmetic coded B-slice prediction type syntax element which indicates the prediction type for the block of video data in a B slice;

decode the P-slice prediction type syntax element to produce the binarized P-slice prediction type syntax element; and

decode the B-slice prediction type syntax element to produce the binarized B-slice prediction type syntax element.

38. The computer-readable storage medium of claim 36, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

39. The computer-readable storage medium of claim 38, wherein the prediction mode includes one of inter-prediction and intra-prediction.

40. The computer-readable storage medium of claim 38, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

Claims

1. A method of encoding video data comprising:

   determining (602) a first prediction type for a block of video data in a P slice;
   representing (604) the first prediction type as a P-slice prediction type syntax element;
   determining (606) a second prediction type for a block of video data in a B slice;
   representing (608) the second prediction type as a B-slice prediction type syntax element;
   determining (610) a P-slice binarization for the P-slice prediction type syntax element;
   determining (612) a B-slice binarization for the B-slice prediction type syntax element; and
   encoding (614) the video data based on the binarizations of the P-slice prediction type syntax element and the B-slice prediction type syntax element;
   characterized in that the P-slice prediction type syntax element binarization and the B-slice prediction type syntax element binarization are determined using the same binarization logic.

2. The method of claim 1, wherein encoding the video data comprises:

   binarizing the P-slice prediction type syntax element with the determined P-slice binarization;
   binarizing the B-slice prediction type syntax element with the determined B-slice binarization;
   applying context adaptive binary arithmetic coding (CABAC) to the binarized P-slice prediction type syntax element; and
   applying context adaptive binary arithmetic coding (CABAC) to the binarized B-slice prediction type syntax element.

3. A method of decoding video data comprising:

   mapping (710) a binarized P-slice prediction type syntax element to a prediction type using a binarization mapping for a block of video data in a P slice;
   mapping (712) a binarized B-slice prediction type syntax element to a prediction type and
   decoding (714) the video data based on the mapped prediction types;
   characterized by using the same binarization mapping for a block of video data in a B slice;

4. The method of claim 3, further comprising:

   receiving (702) a context adaptive binary arithmetic coded P-slice prediction type syntax element which indicates the prediction type for the block of video data in a P slice; and
   receiving a context adaptive binary arithmetic coded B-slice prediction type syntax element which indicates the prediction type for the block of video data in a B slice,
   wherein decoding the video data further comprises:

      decoding (706) the P-slice prediction type syntax element to produce the binarized P-slice prediction type syntax element; and
      decoding (708) the B-slice prediction type syntax element to produce the binarized B-slice prediction type syntax element.

5. The method of claim 1 or 3, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

6. The method of claim 5, wherein the prediction mode includes one of inter-prediction and intra-prediction.

7. The method of claim 5, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

8. An apparatus (20) configured to encode video data comprising:

means (41) for determining a first prediction type for a block of video data in a P slice;
means (41) for representing the first prediction type as a P-slice prediction type syntax element;
means (41) for determining a second prediction type for a block of video data in a B slice;
means (41) for representing the second prediction type as a B-slice prediction type syntax element;
means (41) for determining a P-slice binarization for the P-slice prediction type syntax element;
means for determining a B-slice binarization for the B-slice prediction type syntax element; and
means (56) for encoding the video data based on the binarizations of the P-slice prediction type syntax element and the B-slice prediction syntax element;
characterized in that the means for determining a P-slice binarization for the P-slice prediction type syntax element and means for determining a B-slice binarization for the B-slice prediction type syntax element are configured to use the same binarization logic;

9. The apparatus of claim 8, wherein the means for encoding the video data comprises:

means for binarizing the P-slice prediction type syntax element with the determined P-slice binarization;
means for binarizing the B-slice prediction type syntax element with the determined B-slice binarization;
means for applying context adaptive binary arithmetic coding (CABAC) to the binarized P-slice prediction type syntax element; and
means for applying context adaptive binary arithmetic coding (CABAC) to the binarized B-slice prediction type syntax element.

10. An apparatus (30) configured to decode video data comprising:

means for mapping a binarized P-slice prediction type syntax element to a prediction type using a binarization mapping for a block of video data in a P slice;
means for mapping a binarized B-slice prediction type syntax element to a prediction type using a binarization mapping for a block of video data in a B slice; and
means (80; 81) for decoding the video data based on the mapped prediction types;
characterized in that the means for mapping a binarized P-slice prediction type syntax element and the means for mapping a binarized B-slice prediction type syntax element are configured to use the same binarization mapping.

11. The apparatus of claim 10, further comprising:

means for receiving a context adaptive binary arithmetic coded P-slice prediction type syntax element which indicates the prediction type for the block of video data in a P slice; and
means for receiving a context adaptive binary arithmetic coded B-slice prediction type syntax element which indicates the prediction type for the block of video data in a B slice,
wherein the means for decoding the video data further comprises:

means for decoding the P-slice prediction type syntax element to produce the binarized P-slice prediction type syntax element; and
means for decoding the B-slice prediction type syntax element to produce the binarized B-slice prediction type syntax element.

12. The apparatus of claim 8 or 10, wherein the P-slice prediction type syntax element and the B-slice prediction type syntax element specify a prediction mode and a partition type.

13. The apparatus of claim 12, wherein the prediction mode includes one of inter-prediction and intra-prediction.

14. The apparatus of claim 12, wherein the partition type includes one of symmetric partitions and asymmetric partitions.

15. A computer-readable storage medium storing instructions that, when executed, cause one or more processors configured to encode or decode video data to carry out the method respectively of any of claims 1 to 7.