Amended Set of Claims

1. A method of processing video data, the method comprising:

receiving an external indication at a video decoder;

receiving a video bitstream at the video decoder, wherein the video bitstream comprises compressed video data and is received separately from the external indication; and

treating a clean random access (CRA) picture as a broken link access (BLA) picture based on the external indication wherein, for a CRA picture, associated leading pictures being correctly decodable based on decoding beginning from a random access picture (RAP) picture positioned prior to the CRA picture in decoding order and, for a BLA picture, associated leading pictures being one of non-correctly-decodable or correctly decodable based on decoding beginning from a RAP picture positioned prior to the BLA picture in decoding order.

2. The method of claim 1, wherein the external indication indicates whether a flag should be set in the video decoder, the method further comprising:

setting, based on the external indication, a value of the flag to a default value or a set value; and

checking the value of the flag,

wherein treating the CRA picture as a BLA picture based on the external indication comprises treating the CRA picture as a BLA picture based on the flag being set to the set value.

3. The method of claim 2, wherein the flag is associated with the CRA picture.

4. The method of claim 2, wherein the default value of the flag is "0" and the set value of the flag is "1."

5. The method of claim 2, further comprising, when decoding a coded slice Network Abstraction Layer (NAL) unit, changing a NAL unit type of the coded slice NAL unit based on the flag being set to the set value.

6. The method of claim 5, wherein the flag comprises a first flag, the method further comprising, when decoding the coded slice NAL unit, based on the first flag being set to the set value, changing a value of a second flag, the second flag controlling the output of prior pictures.

7. The method of claim 5, wherein the flag comprises a first flag, the method further comprising, when decoding the coded slice NAL unit, based on the first flag being set to the set value, setting the value of a second flag to "1".

8. The method of claim 5, wherein decoding the coded slice NAL unit includes parsing the coded slice NAL unit to identify the NAL unit type.

9. The method of claim 8, wherein when decoding the coded slice NAL unit, based on the flag being set to the set value and the NAL unit type of the coded slice NAL unit indicates a CRA picture:

changing the value of the NAL unit type to indicate a BLA picture.

10. The method of claim 2, wherein the external indication comprises a message that indicates that a CRA picture should be treated as a BLA picture.

11. The method of claim 2, wherein the flag comprises a HandleCraAsBlaFlag, the HandleCraAsBlaFlag indicating whether a CRA picture is to be treated as a BLA picture.

12. (Cancelled).

13. A video decoder for processing video data, comprising a processor configured to:

receive an external indication at a video decoder;

receive a video bitstream at the video decoder, wherein the video bitstream comprises compressed video data and is received separately from the external indication; and

treat a clean random access (CRA) picture as a broken link access (BLA) picture based on the external indication wherein, for a CRA picture, associated leading pictures being correctly decodable based on decoding beginning from a RAP picture positioned prior to the CRA picture in decoding order and, for a BLA picture, associated leading pictures being one of non-correctly-decodable or correctly decodable based on decoding beginning from a RAP picture positioned prior to the BLA picture in decoding order.

14. The video decoder of claim 13, wherein the external indication indicates whether a flag should be set in the video decoder, and wherein the processor is further configured to:

set, based on the external indication, a value of the flag to a default value or a set value; and

check the value of the flag,

wherein treating the CRA picture as a BLA picture based on the external indication comprises treating the CRA picture as a BLA picture based on the flag being set to the set value.

15. The video decoder of claim 14, wherein the flag is associated with the CRA picture.

16. (Cancelled).

17. The video decoder of claim 14, wherein the default value of the flag is "0" and the set value of the flag is "1."

18. The video decoder of claim 14, the processor further configured to, when decoding a coded slice NAL unit change a NAL unit type of the coded slice NAL unit based on the flag being set to the set value.

19. The video decoder of claim 18, wherein the flag comprises a first flag and the processor further configured to, when decoding the coded slice NAL unit, based on the first flag being set to the set value change a value of a second flag.

20. The video decoder of claim 18, wherein the flag comprises a first flag, the processor is further configured to, when decoding the coded slice NAL unit based on the first flag being set to the set value, set the value of a second flag to "1".

21. The video decoder of claim 18, the processor further configured to parse the coded slice NAL unit to identify the NAL unit type.

22. The video decoder of claim 21, the processor further configured to when decoding the coded slice NAL unit, based on being set to the set value and the NAL unit type of the coded slice NAL unit indicates a CRA picture:

change the value of the NAL unit type to indicate a BLA picture.

23. The video decoder of claim 14, wherein the external indication comprises a message that indicates that a CRA picture should be treated as a BLA picture.

24. The video decoder of claim 14, wherein the flag comprises a HandleCraAsBlaFlag, the HandleCraAsBlaFlag indicating whether a CRA picture is to be treated as a BLA picture.

25. (Cancelled).

26. A video decoder for processing video data, comprising:

means for receiving an external indication at a video decoder;

means for receiving a video bitstream at the video decoder, wherein the video bitstream comprises compressed video data and is received separately from the external indication; and

means for treating a clean random access (CRA) picture as a broken link access (BLA) picture based on the external indication wherein, for a CRA picture, associated leading pictures being correctly decodable based on decoding beginning from a RAP picture positioned prior to the CRA picture in decoding order and, for a BLA picture, associated leading pictures being one of non-correctly-decodable or correctly decodable based on decoding beginning from a RAP picture positioned prior to the BLA picture in decoding order.

27. The video decoder of claim 26, wherein the external indication indicates whether a flag should be set in the video decoder, the video decoder further comprising:

means for setting, based on the external indication, a value of the flag to a default value or a set value; and

means for checking the value of the flag,

wherein treating the CRA picture as a BLA picture based on the external indication comprises treating the CRA picture as a BLA picture based on the flag being set to the set value.

28. The video decoder of claim 27, wherein the flag is associated with the CRA picture.

29. The video decoder of claim 27, wherein the default value of the flag is "0" and the set value of the flag is "1."

30. The video decoder of claim 27, further comprising, when decoding a coded slice NAL unit, means for changing a NAL unit type of the coded slice NAL unit based on the flag being set to the set value.

31. The video decoder of claim 30, the flag comprising a first flag and the video decoder further comprising, when decoding the coded slice NAL unit, based on the first flag being set to the set value, means for changing the value of a second flag.

32. The video decoder of claim 30, the flag comprises a first flag, the video decoder further comprising, when decoding the coded slice NAL unit, based on the first flag being set to the set value, means for setting the value of a second flag to "1."

33. The video decoder of claim 30, wherein decoding the coded slice NAL unit includes parsing the coded slice NAL unit to identify the NAL unit type.

34. The video decoder of claim 33, wherein when decoding the coded slice NAL unit, based on the flag being set to the set value and the NAL unit type of the coded slice NAL unit indicates a CRA picture:

changing the value of the NAL unit type to indicate a BLA picture.

35. The video decoder of claim 27, wherein the external indication comprises a message that indicates that a CRA picture should be treated as a BLA picture.

36. The video decoder of claim 27, wherein the flag comprises a HandleCraAsBlaFlag, the HandleCraAsBlaFlag indicating whether a CRA picture is to be treated as a BLA picture.

37. (Cancelled).

38. A computer-readable storage medium having stored thereon instructions that, when executed, cause one or more processors of a device to:

receive an external indication at a video decoder;

receive a video bitstream at the video decoder, wherein the video bitstream comprises compressed video data and is received separately from the external indication; and

treat a clean random access (CRA) picture as a broken link access (BLA) picture based on the external indication wherein, for a CRA picture, associated leading pictures being correctly decodable based on decoding beginning from a RAP picture positioned prior to the CRA picture in decoding order and, for a BLA picture, associated leading pictures being one of non-correctly-decodable or correctly decodable based on decoding beginning from a RAP picture positioned prior to the BLA picture in decoding order.

39. The computer-readable storage medium of claim 38, wherein the external indication indicates whether a flag should be set in the video decoder, the computer-readable storage medium wherein the instructions, when executed, cause the one or more processors of a device to:

set, based on the external indication, a value of the flag to a default value or a set value; and

check the value of the flag,

wherein treating the CRA picture as a BLA picture based on the external indication comprises treating the CRA picture as a BLA picture based on the flag being set to the set value.

40. The computer-readable storage medium of claim 39, wherein the flag is associated with the CRA picture.

41. (Cancelled).

42. The computer-readable storage medium of claim 39, further configured to cause the one or more processors to, when decoding a coded slice NAL unit, change a NAL unit type of the coded slice NAL unit based on the flag being set to the set value.

43. The computer-readable storage medium of claim 42, wherein the flag comprises a first flag and the computer-readable medium is further configured to cause the one or more processors to, when decoding the coded slice NAL unit, based on the first flag being set to the set value, change the value of a second flag.

44. The computer-readable storage medium of claim 42, wherein the flag comprises a first flag and the computer-readable medium is further configured to cause the one or more processors to, when decoding the coded slice NAL unit, based on the first flag being set to the set value, set the value of a second flag to "1".

45. The computer-readable storage medium of claim 42, further configured to cause the one or more processors to parse the coded slice NAL unit to identify the NAL unit type.

CLAIMS

1. A method of processing video data, the method comprising:

receiving, at a video decoding device, a message comprising an external indication from a network entity, the network entity being distinct and separate from the video decoding device;

receiving, at the video decoding device, a video bitstream, wherein the video bitstream comprises compressed video data and wherein the video bitstream is received separately from the message comprising the external indication; and

treating a clean random access (CRA) picture as a broken link access (BLA) picture based on the external indication.

2. The method of claim **1**, wherein the external indication indicates whether a value of a flag should be set, by the video decoding device, to one of a default value or a set value, the method further comprising:

setting the value of the flag to a value specified by the network entity,

wherein treating the CRA picture as a BLA picture based on the external indication comprises treating the CRA picture as a BLA picture based on the value of the flag being set to the value specified by the network entity.

3. The method of claim **2**, wherein the flag is associated with the CRA picture.

4. The method of claim **2**, wherein the default value of the flag indicates that the CRA picture is not to be treated as a BLA picture.

5. The method of claim **2**, further comprising, decoding a coded slice Network Abstraction Layer (NAL) unit and, when decoding a coded slice NAL unit, changing a NAL unit type of the coded slice NAL unit based on the flag being set to the set value.

6. The method of claim **2**, wherein the flag comprises a first flag, the method further comprising, when decoding a coded slice NAL unit, based on the first flag being set to the set value, changing a value of a second flag, the second flag controlling the output of prior decoded pictures.

7. The method of claim **2**, wherein the flag comprises a first flag, the method further comprising, when decoding a coded slice NAL unit, based on the first flag being set to the set value, setting the value of a second flag to "1".

8. The method of claim **5**, wherein decoding the coded slice NAL unit includes parsing the coded slice NAL unit to identify the NAL unit type.

9. The method of claim **2**, wherein the flag comprises a first flag and wherein, when decoding a coded slice Network Abstraction Layer (NAL) unit, if the first flag is equal to 1 and a NAL unit type of a coded slice NAL unit indicates a CRA picture, the method further comprises changing the value of the NAL unit type to indicate a BLA picture.

10. The method of claim **2**, wherein the flag is a HandleCraAsBlaFlag, the HandleCraAsBlaFla indicating whether a articular CRA picture is to be treated as a BLA picture.

11. The method of claim **2**, further comprising, based on the value of the flag, setting a value of a second flag, the second flag being indicative of whether at least one picture decoded prior to decoding of the CRA picture is to be output.

12. A video decoding device, comprising:

memory configured to store video data; and

a processor in communication with the memory, the processor configured to:

receive, at the video decoding device, a message comprising an external indication from a network entity, the network entity being separate and distinct from the video decoding device;

receive, at the video decoding device, a video bitstream, wherein the video bitstream comprises compressed video data and wherein the video bitstream is received separately from the message comprising the external indication; and

treat a clean random access (CRA) picture as a broken link access (BLA) picture based on the external indication.

13. The video decoding device of claim **12**, wherein the external indication indicates whether a value of a flag should be set, by the video decoding device, to one of a default value or a set value and wherein the processor is further configured to:

set, the value of the flag to a value specified by the network entity,

wherein treating the CRA picture as a BLA pictures based on the external indication comprises treating the CRA picture as a BLA picture based on the value of the flag being set to the value specified by the network entity.

14. The video decoding device of claim **13**, wherein the flag is associated with the CRA picture.

15. The video decoding device of claim **13**, wherein the default value of the flag indicates that the CRA picture is not to be treated as a BLA picture.

16. The video decoding device of claim **13**, the processor further configured to, when decoding a coded slice Network Abstraction Layer (NAL) unit change a NAL unit type of the coded slice NAL unit based on the flag being set to the set value.

17. The video decoding device of claim **13**, wherein the flag comprises a first flag and the processor is further configured to, when decoding a coded slice NAL unit, based on the first flag being set to the set value, change a value of a second flag.

18. The video decoding device of claim **13**, wherein the flag comprises a first flag, the processor is further configured to, when decoding a coded slice NAL unit based on the first flag being set to the set value, set the value of a second flag to "1".

19. The video decoding device of claim **16**, the processor is further configured to parse the coded slice NAL unit to identify the NAL unit type.

20. The video decoding device of claim **19**, wherein the flag comprises a first flag and wherein, when decoding a coded slice NAL unit, if the first flag is equal to 1 and a NAL unit type of a coded slice NAL unit indicates a CRA picture, the processor is further configured to change the value of the NAL unit type to indicate a BLA picture.

21. The video decoding device of claim **13**, wherein the flag is a HandleCraAsBlaFlag, the HandleCraAsBlaFlag indicating whether a CRA picture is to be treated as a BLA picture.

22. The video decoding device of claim **13**, wherein the processor is further configured to, based on the value of the flag, set a value of a second flag, the second flag being indicative of whether at least one picture decoded prior to decoding of the CRA picture is to be output.

23. A video decoding device, comprising:

a memory;

means, in communication with the memory, for receiving, at the video decoding device, a message comprising an external indication from a network entity, the network entity being separate and distinct from the video decoding device;

means, in communication with the memory, for receiving, at the video decoding device, a video bitstream, wherein the video bitstream comprises compressed video data

and wherein the video bitstream is received separately from the message comprising the external indication; and

means, in communication with the memory, for treating a clean random access (CRA) picture as a broken link access (BLA) picture based on the external indication.

24. The video decoding device of claim **23**, wherein the external indication indicates whether a value of a flag should be set, by the video decoding device, to one of a default value or a set value, the video decoding device further comprising:

means for setting the value of the flag to a value specified by the network entity,

wherein treating the CRA picture as a BLA picture based on the external indication comprises treating the CRA picture as a BLA picture based on the value of the flag being set to the value specified by the network entity.

25. The video decoding device of claim **24**, wherein the flag is associated with the CRA picture.

26. The video decoding device of claim **24**, wherein the default value of the flag indicates that the CRA picture is not to be treated as a BLA picture.

27. The video decoding device of claim **24**, further comprising means, when decoding a coded slice Network Abstraction Layer (NAL) unit, for changing a NAL unit type of the coded slice NAL unit based on the flag being set to the set value.

28. The video decoding device of claim **24**, the flag comprising a first flag and the video decoding device further comprising means, when decoding a coded slice NAL unit and based on the first flag being set to the set value, for changing the value of a second flag, the second flag controlling the output of prior decoded pictures.

29. The video decoding device of claim **24**, wherein the flag comprises a first flag, the video decoding device further comprising means, when decoding a coded slice NAL unit, and based on the first flag being set to the set value, for setting the value of a second flag to "1," the second flag controlling the output of prior decoded pictures.

30. The video decoding device of claim **27**, wherein decoding the coded slice NAL unit includes parsing the coded slice NAL unit to identify the NAL unit type.

31. The video decoding device of claim **24**, wherein the flag comprises a first flag and wherein, when decoding a coded slice Network Abstraction Layer (NAL) unit, if the first flag is equal to 1 and a NAL unit type of a coded slice NAL unit indicates a CRA picture, the the video decoding device changes the value of the NAL unit type to indicate a BLA picture.

32. The video decoding device of claim **24**, wherein the flag is a HandleCraAsBlaFlag, the HandleCraAsBlaFlag indicating whether a CRA picture is to be treated as a BLA picture.

33. The video decoding device of claim **24**, wherein the video decoding device further comprises means for setting, based on the value of the flag, a value of a second flag, the second flag being indicative of whether at least one picture decoded prior to decoding of the CRA picture is to be output.

34. A non-transitory computer-readable storage medium having stored thereon instructions that, when executed, cause one or more processors of a video decoding device to:

receive, at the video decoding device, a message comprising an external indication from a network entity, the network entity being separate and distinct from the video decoding device;

receive, at the video decoding device, a video bitstream, wherein the video bitstream comprises compressed video data and wherein the video bitstream is received separately from the message comprising the external indication; and

treat a clean random access (CRA) picture as a broken link access (BLA) picture based on the external indication.

35. The non-transitory computer-readable storage medium of claim **34**, wherein the external indication indicates whether a value of a flag should be set, by the video decoding device, to one of a default value or a set value, wherein the instructions, when executed, further cause the one or more processors of a device to:

set the value of the flag to a value specified by the network entity,

wherein treating the CRA picture as a BLA picture based on the external indication comprises treating the CRA picture as a BLA picture based on the value of the flag being set to the value specified by the network entity.

36. The non-transitory computer-readable storage medium of claim **35**, wherein the flag is associated with the CRA picture.

37. The non-transitory computer-readable storage medium of claim **35**, wherein the instructions are further configured to cause the one or more processors to, when decoding a coded slice NAL unit, change a NAL unit type of the coded slice NAL unit based on the flag being set to the set value.

38. The non-transitory computer-readable storage medium of claim **35**, wherein the flag comprises a first flag and the computer-readable medium is further configured to cause the one or more processors to, when decoding a coded slice NAL unit and based on the first flag being set to the set value, change the value of a second flag, the second flag controlling the output of prior decoded pictures.

39. The non-transitory computer-readable storage medium of claim **37**, further configured to cause the one or more processors to parse the coded slice NAL unit to identify the NAL unit type.

40. The non-transitory computer-readable storage medium of claim **35**, wherein the flag comprises a first flag, the non-transitory computer-readable storage medium further having stored thereon instructions that, when executed, cause one or more processors of the device to, when decoding a coded slice NAL unit and based on the first flag being set to the set value, change a value of a second flag, the second flag controlling the output of prior decoded pictures.

41. The non-transitory computer-readable storage medium of claim **35**, the non-transitory computer-readable storage medium further having stored thereon instructions that, when executed, cause one or more processors of the device to, based on the value of the flag, set a value of a second flag, the second flag being indicative of whether at least one picture decoded prior to decoding of the CRA picture is to be output.