~~**WHAT IS CLAIMED IS:**~~

CLAIMS

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

receiving, in a bitstream, a syntax element ~~indicating a maximum block size~~as part of a sequence parameter set syntax structure for a picture, wherein the syntax element indicates a maximum block size for both a transform skip mode~~;~~

~~determining a maximum block size for~~ and a block-based delta pulse code modulation (BDPCM) mode;

determining a maximum block size for the BDPCM mode based on the syntax element~~;~~ ~~and~~, wherein the maximum block size is limited to a range of sizes from 4 to 32;

~~decoding a block of video data~~determining the maximum block size for the transform skip mode based on the syntax element; and

based on the determined maximum block size for the ~~BDPCM mode~~transform skip mode, determining that a BDPCM mode flag is present in the bitstream for the first block in response to a size for the first block being less than or equal to the maximum block size for the BDPCM mode and decoding the BDPCM mode flag from the bitstream;

determining that a first block of the picture is coded using the BDPCM mode based on the BDPCM mode flag;

decoding the first block based on the determined maximum block size; determining that a second block of the picture is coded using the transform skip mode;

decoding the second block based on the determined maximum block size; and

outputting a decoded version of the picture.

2. The method of claim 1, wherein determining the maximum block size for the BDPCM mode based on the syntax element comprises determining the maximum block size for the BDPCM mode to be equal to the maximum block size used for the transform skip mode.

3. The method of claim 1, wherein ~~receiving the syntax element comprises receiving the syntax element as part of a sequence parameter set syntax structure.~~

~~4. The method of claim 1, wherein~~ the syntax element has a value equal to X, wherein X is an integer value in a range of 0 to 3 inclusive, and wherein the maximum block size for the BDPCM mode is equal to 1 << (X + 2), wherein << represents a left shift operation.

~~5~~4. The method of claim ~~4~~3, wherein the maximum block size for the BDPCM mode comprises a maximum block width for the BDPCM mode.

~~6~~5. The method of claim ~~4~~3, wherein the maximum block size for the BDPCM mode comprises a maximum block height for the BDPCM mode.

~~7. The method of claim 1, further comprising:~~

~~determining the maximum block size for the transform skip mode based on the syntax element; and~~

~~based on the maximum block size for the transform skip mode, determining whether a BDPCM mode flag is present in a bitstream that includes an encoded representation of the video data.~~

~~8. The method of claim 7, wherein determining whether the BDPCM mode flag is present in the bitstream that includes the encoded representation of the video data comprises:~~

~~determining the BDPCM mode flag is present for the block of video data in response to a size for the block of video data being less than or equal to the maximum block size for the BDPCM mode.~~

~~9~~6. The method of claim 1, wherein the BDPCM mode comprises a residual domain BDPCM (RDPCM) mode.

~~10~~7. A method of encoding video data, the method comprising:

determining, for a first block of a picture, a maximum block size used for a transform skip mode, wherein the maximum block size is limited to a range of sizes from 4 to 32;

determining, for a second block of the picture, a maximum block size for a block-based delta pulse code modulation (BDPCM) mode based on the maximum block size used for the transform skip mode; ~~and~~

~~encoding~~ based on the maximum block size for the transform skip mode, include a ~~block~~BDPCM mode flag in a bitstream of the encoded video data in response to a size for the second block being less than or equal to the maximum block size for the BDPCM mode; and

encoding the second block based on the determined maximum block size for the BDPCM mode~~.~~, wherein encoding the second block based on the determined maximum block size for the BDPCM mode comprises generating, for inclusion in a sequence parameter set syntax structure applying to the picture, a syntax element indicating the maximum block size used for both the transform skip mode and the BDPCM mode.

~~11~~8. The method of claim ~~10~~7, wherein determining the maximum block size for the BDPCM mode comprises determining the maximum block size for the BDPCM mode to be equal to the maximum block size used for the transform skip mode.

~~12~~9. The method of claim ~~10, further comprising:~~

~~generating, for inclusion in a sequence parameter set syntax structure of the video data, a syntax element indicating the maximum block size used for the transform skip mode.~~

~~13. The method of claim 12~~7, wherein the syntax element has a value equal to X, wherein X is an integer value in a range of 0 to 3 inclusive, and wherein the maximum block size for the BDPCM mode is equal to 1 << (X + 2), wherein << represents a left shift operation.

~~14~~10. The method of claim ~~13~~9, wherein the maximum block size for the BDPCM mode comprises a maximum block width for the BDPCM mode.

~~15~~11. The method of claim ~~13~~9, wherein the maximum block size for the BDPCM mode comprises a maximum block height for the BDPCM mode.

~~16~~12. The method of claim ~~10, further comprising:~~

~~based on the maximum block size for the transform skip mode, determining whether to include a BDPCM mode flag in a bitstream of the encoded video data.~~

~~17. The method of claim 16, wherein determining whether to include the BDPCM mode flag in the bitstream of the encoded video data comprises:~~

~~including the BDPCM mode flag in the bitstream of encoded video data in response to a size for the block of video data being less than or equal to the maximum block size for the BDPCM mode.~~

~~18. The method of claim 10~~7, wherein the BDPCM mode comprises a residual domain BDPCM (RDPCM) mode.

~~19~~13. A device for decoding video data, the device comprising:

a memory configured to store video data; and

one or more processors configured to:

receive, in a bitstream, a syntax element ~~indicating a maximum block size~~as part of a sequence parameter set syntax structure for a picture, wherein the syntax element indicates a maximum block size for both a transform skip mode~~;~~

~~determine a maximum block size for~~ and a block-based delta pulse code modulation (BDPCM) mode;

determine a maximum block size for the BDPCM mode based on the syntax element~~;~~ ~~and~~, wherein the maximum block size is limited to a range of sizes from 4 to 32;

decode ~~a~~the first block ~~of video data~~ based on the determined maximum block size ~~for the BDPCM mode.~~; determine that a second block of the picture is coded using the transform skip mode;

decode the second block based on the determined maximum block size; and

output a decoded version of the picture.

~~20~~14. The device of claim ~~19~~13, wherein to determine the maximum block size for the BDPCM mode based on the syntax element, the one or more processors are further configured to determine the maximum block size for the BDPCM mode to be equal to the maximum block size used for the transform skip mode.

~~21~~15. The device of claim ~~19, wherein to receive the syntax element, the one or more processors are further configured to receive the syntax element as part of a sequence parameter set syntax structure.~~

~~22. The device of claim 19~~13, wherein the syntax element has a value equal to X, wherein X is an integer value in a range of 0 to 3 inclusive, and wherein the maximum block size for the BDPCM mode is equal to 1 << (X + 2), wherein << represents a left shift operation.

~~23~~16. The device of claim ~~22~~15, wherein the maximum block size for the BDPCM mode comprises a maximum block width for the BDPCM mode.

~~24~~17. The device of claim ~~22~~15, wherein the maximum block size for the BDPCM mode comprises a maximum block height for the BDPCM mode.

~~25~~18. The device of claim ~~19, wherein the one or more processors are further configured to:~~

~~determine the maximum block size for the transform skip mode based on the syntax element; and~~

~~based on the maximum block size for the transform skip mode, determine whether a BDPCM mode flag is present in a bitstream that includes an encoded representation of the video data.~~

~~26. The device of claim 25, wherein to determine whether the BDPCM mode flag is present in the bitstream that includes the encoded representation of the video data, the one or more processors are further configured to:~~

~~determine the BDPCM mode flag is present for the block of video data in response to a size for the block of video data being less than or equal to the maximum block size for the BDPCM mode.~~

~~27. The device of claim 19~~13, wherein the BDPCM mode comprises a residual domain BDPCM (RDPCM) mode.

~~28~~19. The device of claim ~~19~~13, wherein the device comprises a wireless communication device, further comprising at least one of a receiver configured to receive an encoded representation of the video data or a display configured to display ~~the~~a decoded ~~block~~version of ~~video data~~the picture.

~~29~~20. The device of claim ~~28~~19, wherein the wireless communication device comprises a telephone handset and wherein the receiver is configured to demodulate, according to a wireless communication standard, a signal comprising the encoded representation of the video data.

~~30~~21. A device for encoding video data, the device comprising:
a memory configured to store video data; and
one or more processors configured to:

determine, for a first block of a picture, a maximum block size used for a transform skip mode, wherein the maximum block size is limited to a range of sizes from 4 to 32;

determine, for a second block of the picture, a maximum block size for a block-based delta pulse code modulation (BDPCM) mode based on the maximum block size used for the transform skip mode; ~~and~~

~~encode~~based on the maximum block size for the transform skip mode, include a ~~block~~BDPCM mode flag in a bitstream of the encoded video data in response to a size for the second block being less than or equal to the maximum block size for the BDPCM mode; and

encode, into the bitsteam, the second block based on the determined maximum block size for the BDPCM mode~~.~~, wherein encoding the second block based on the determined maximum block size for the BDPCM mode comprises generating, for inclusion in a sequence parameter set

syntax structure applying to the picture, a syntax element indicating the maximum block size used for both the transform skip mode and the BDPCM mode.

~~31~~22. The device of claim ~~30~~21, wherein to determine the maximum block size for the BDPCM mode, the one or more processors are further configured to determine the maximum block size for the BDPCM mode to be equal to the maximum block size used for the transform skip mode.

~~32~~23. The device of claim ~~30, wherein the one or more processors are further configured to:~~

~~generate, for inclusion in a sequence parameter set syntax structure of the video data, a syntax element indicating the maximum block size used for the transform skip mode.~~

~~33. The device of claim 32~~21, wherein the syntax element has a value equal to X, wherein X is an integer value in a range of 0 to 3 inclusive, and wherein the maximum block size for the BDPCM mode is equal to 1 << (X + 2), wherein << represents a left shift operation.

~~34~~24. The device of claim ~~33~~23, wherein the maximum block size for the BDPCM mode comprises a maximum block width for the BDPCM mode.

~~35~~25. The device of claim ~~33~~23, wherein the maximum block size for the BDPCM mode comprises a maximum block height for the BDPCM mode.

~~36~~26. The device of claim ~~30, wherein the one or more processors are further configured to:~~

~~based on the maximum block size for the transform skip mode, determine whether to include a BDPCM mode flag in a bitstream of the encoded video data.~~

~~37. The device of claim 36, wherein to determine whether to include the BDPCM mode flag in the bitstream of the encoded video data, the one or more processors are further configured to:~~

~~include the BDPCM mode flag in the bitstream of encoded video data in response to a size for the block of video data being less than or equal to the maximum block size for the BDPCM mode.~~

~~38. The device of claim 30~~21, wherein the BDPCM mode comprises a residual domain BDPCM (RDPCM) mode.

~~39~~27. The device of claim ~~30~~21, further comprising:

a camera configured to capture the video data.

~~40~~28. A non-transitory computer-readable storage medium storing instructions that when executed by one or more processors cause the one or more processor to:

receive, in a bitstream, a syntax element ~~indicating a maximum block size~~as part of a sequence parameter set syntax structure for a picture, wherein the syntax element indicates a maximum block size for both a transform skip mode~~;~~

~~determine a maximum block size for~~ and a block-based delta pulse code modulation (BDPCM) mode;

determine a maximum block size for the BDPCM mode based on the syntax element~~;~~ ~~and~~, wherein the maximum block size is limited to a range of sizes from 4 to 32;

~~decode a block of video data~~ determine the maximum block size for the transform skip mode based on the syntax element; and

based on the determined maximum block size for the ~~BDPCM mode.~~transform skip mode, determine that a BDPCM mode flag is present in the bitstream for the first block in response to a size for the first block being less than or equal to the maximum block size for the BDPCM mode and determine the BDPCM mode flag from the bitstream;

determine that a first block of the picture is coded using the BDPCM mode based on the BDPCM mode flag;

decode the first block based on the determined maximum block size; determine that a second block of the picture is coded using the transform skip mode;

decode the second block based on the determined maximum block size; and

output a decoded version of the picture.

~~41~~29. An apparatus for decoding video data, the apparatus comprising:

means for receiving, in a bitstream, a syntax element ~~indicating~~as part of a sequence parameter set syntax structure for a picture, wherein the syntax element indicates a maximum block size for both a transform skip mode~~;~~

~~means for determining a maximum block size for~~ and a block-based delta pulse code modulation (BDPCM) mode ~~based on the syntax element; and~~;

~~means for decoding a block~~means for determining a maximum block size for the BDPCM mode based on the syntax element, wherein the maximum block size is limited to a range of ~~video data~~sizes from 4 to 32;

means for determining the maximum block size for the transform skip mode based on the syntax element; and

means for, based on the determined maximum block size for the ~~BDPCM mode~~transform skip mode, determining that a BDPCM mode flag is present in the bitstream for the first block in response to a size for the first block being less than or equal to the maximum block size for the BDPCM mode and means for decoding the BDPCM mode flag from the bitstream;

means for determining that a first block of the picture is coded using the BDPCM mode;

means for decoding the first block based on the determined maximum block size; means for determining that a second block of the picture is coded using the transform skip mode;

means for decoding the second block based on the determined maximum block size; and

means for outputting a decoded version of the picture.