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

CLAIMS

~~1. A method of decoding video data, the method comprising:~~
~~determining a color component of a unit of video data;~~
~~determining, based at least on the color component, a context for context-adaptive binary arithmetic coding (CABAC) a syntax element that specifies a value of a low-frequency non-separable transform (LFNST) index for the unit of video data;~~
~~CABAC decoding, based on the determined context and via a syntax structure for the unit of video data, the syntax element that specifies the value of the LFNST index for the unit of video data; and~~
~~inverse-transforming, based on a transform indicated by the value of the LFNST index, transform coefficients of the unit of video data.~~

~~2. The method of claim 1, further comprising:~~
~~obtaining, for the unit of video data, a value of a multiple transform selection (MTS) index,~~
~~wherein determining the context comprises determining the context based on the value of the MTS index.~~

~~3. The method of claim 1, further comprising:~~
~~determining a block size of the unit of video data,~~
~~wherein determining the context comprises determining the context based on the block size of the unit of video data.~~

~~4. The method of claim 1, further comprising:~~
~~determining a number of non-zero transform coefficients at a level of the unit of video data,~~
~~wherein determining the context comprises determining the context based on the number of non-zero transform coefficients.~~

~~5. The method of claim 1, wherein the unit of video data is a coding unit (CU) of video data.~~

6. The method of claim 1, wherein the unit of video data is a transform unit (TU) of video data.

7. The method of claim 6, further comprising:
determining a depth of the TU in a partition structure,
wherein determining the context comprises determining the context based on the depth of the TU.

8. The method of claim 6, wherein the TU is a first TU in a coding unit (CU) of video data, the method further comprising:
inferring, for other TUs in the CU, values of LFNST indices based on the value of the LFNST index for the first TU.

9. The method of claim 1, wherein the syntax element that specifies the value of the LFNST index for the unit of video data comprises a lfnst_idx syntax element or a tu_lfnst_idx syntax element.

10. The method of claim 1, wherein determining the context comprises determining a value of ctxInc for a bin of the syntax element, the value of the ctxInc representing an increment to apply to a previous context.

11. A method of encoding video data, the method comprising:
selecting, from a plurality of low-frequency non-separable transforms (LFNSTs), a LFNST having an LFNST index;
transforming, using the LFNST, transform coefficients of a unit of video data;
determining a color component of the unit of video data;
determining, based at least on the color component, a context for context-adaptive binary arithmetic coding (CABAC) a syntax element that specifies the value of the LFNST index for the unit of video data; and
CABAC encoding, based on the determined context and via a syntax structure for the unit of video data, the syntax element that specifies the value of the LFNST index for the unit of video data.

12. The method of claim 11, further comprising:

~~obtaining, for the unit of video data, a value of a multiple transform selection (MTS) index,~~
~~wherein determining the context comprises determining the context based on the value of the MTS index.~~

~~13. The method of claim 11, further comprising:~~
~~determining a block size of the unit of video data,~~
~~wherein determining the context comprises determining the context based on the block size of the unit of video data.~~

~~14. The method of claim 11, further comprising:~~
~~determining a number of non-zero transform coefficients at a level of the unit of video data,~~
~~wherein determining the context comprises determining the context based on the number of non-zero transform coefficients.~~

~~15. The method of claim 11, wherein the unit of video data is a coding unit (CU) of video data.~~

~~16. The method of claim 11, wherein the unit of video data is a transform unit (TU) of video data.~~

~~17. The method of claim 16, further comprising:~~
~~determining a depth of the TU in a partition structure,~~
~~wherein determining the context comprises determining the context based on the depth of the TU.~~

~~18. The method of claim 16, wherein the TU is a first TU in a coding unit (CU) of video data, the method further comprising:~~
~~refrain from encoding syntax elements that specify values of LFNST indices for other TUs in the CU.~~

19. The method of claim 11, wherein the syntax element that specifies the value of the LFNST index for the unit of video data comprises a lfnst_idx syntax element or a tu_lfnst_idx syntax element.

20. The method of claim 11, wherein determining the context comprises determining a value of ctxInc for a bin of the syntax element.

21. A device for coding video data, the device comprising:
a memory; and
one or more processors implemented in circuitry and configured to:
determine a color component of a unit of video data;
determine, based at least on the color component, a context for context-adaptive binary arithmetic coding (CABAC) a syntax element that specifies a value of a low-frequency non-separable transform (LFNST) index for the unit of video data;
CABAC code, based on the determined context and via a syntax structure for the unit of video data, the syntax element that specifies the value of the LFNST index for the unit of video data; and
transform, based on a transform indicated by the value of the LFNST index, transform coefficients of the unit of video data.

22. The device of claim 21, wherein the one or more processors are further configured to:
obtain, for the unit of video data, a value of a multiple transform selection (MTS) index,
wherein, to determine the context, the one or more processors are configured to determine the context based on the value of the MTS index.

23. The device of claim 21, wherein the one or more processors are further configured to:
determine a block size of the unit of video data,
wherein, to determine the context, the one or more processors are configured to determine the context based on the block size of the unit of video data.

24. The device of claim 21, wherein the one or more processors are further configured to:

~~determine a number of non-zero transform coefficients at a level of the unit of video data,~~

~~wherein, to determine the context, the one or more processors are configured to determine the context based on the number of non-zero transform coefficients.~~

~~25. The device of claim 21, wherein the unit of video data is a coding unit (CU) of video data.~~

~~26. The device of claim 21, wherein the unit of video data is a transform unit (TU) of video data.~~

~~27. The device of claim 26, wherein the one or more processors are further configured to:~~

~~determine a depth of the TU in a partition structure,~~

~~wherein, to determine the context, the one or more processors are configured to determine the context based on the depth of the TU.~~

~~28. The device of claim 26, wherein the TU is a first TU in a coding unit (CU) of video data, and wherein the one or more processors are configured to:~~

~~infer, for other TUs in the CU, values of LFNST indices based on the value of the LFNST index for the first TU.~~

~~29. The device of claim 21, wherein the syntax element that specifies the value of the LFNST index for the unit of video data comprises a lfnst_idx syntax element or a tu_lfnst_idx syntax element.~~

~~30. The device of claim 21, wherein, to determine the context, the one or more processors are configured to determine a value of ctxInc for a bin of the syntax element.~~

1. An invention not claimed in any divisional application.