CLAIMS

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

decoding, from a coded video bitstream and using context adaptive binary arithmetic coding (CABAC) with a context, a syntax element, palette_transpose_flag, that indicates whether a transpose process is applied to palette indices of a palette for a current block of video data;

decoding, from the coded video bitstream, using CABAC with a context and at a position in the coded video bitstream that is directly after the palette_transpose_flag, one or more syntax elements related to delta quantization parameter (QP) and/or chroma QP offsets for the current block of video data in order to improve CABAC throughput;

decoding, from the coded video bitstream, a group of consecutive syntax elements using Bypass mode, wherein the group comprises:

one or more syntax elements that indicate a number of zeros that precede a non-zero entry in an array that indicates whether entries from a predictor palette are reused in the current palette;

a syntax element that indicates a number of entries in the current palette that are explicitly signalled;

one or more syntax elements that each indicate a value of a component in an entry in the current palette;

a syntax element that indicates whether the current block of video data includes at least one escape coded sample;

a syntax element that indicates a number of indices in the current palette that are explicitly signalled or inferred; and

one or more syntax elements that indicate indices in an array of current palette entries; and

decoding the current block of video data based on the palette for the current block of video data, the group of syntax elements, and the one or more syntax elements related to delta QP and/or chroma QP offsets for the current block of video data.

2. A method of encoding video data, the method comprising:

encoding, in a coded video bitstream and using context adaptive binary arithmetic coding (CABAC) with a context, a syntax element, palette_transpose_flag, that indicates whether a transpose process is applied to palette indices of a palette for a current block of video data;

encoding, in the coded video bitstream, using CABAC with a context and at a position in the coded video bitstream that is directly after the palette_transpose_flag, one or more syntax elements related to delta quantization parameter (QP) and/or chroma QP offsets for the current block of video data;

encoding, in the coded video bitstream, a group of consecutive syntax elements using Bypass mode, wherein the group comprises:

one or more syntax elements that indicate a number of zeros that precede a non-zero entry in an array that indicates whether entries from a predictor palette are reused in the current palette;

a syntax element that indicates a number of entries in the current palette that are explicitly signalled;

one or more syntax elements that each indicate a value of a component in an entry in the current palette;

a syntax element that indicates whether the current block of video data includes at least one escape coded sample;

a syntax element that indicates a number of indices in the current palette that are explicitly signalled or inferred; and

one or more syntax elements that indicate indices in an array of current palette entries; and

encoding the current block of video data based on the palette for the current block of video data, the group of syntax elements, and the one or more syntax elements related to delta QP and/or chroma QP offsets for the current block of video data.

3. The method of claim 1 wherein the syntax element that indicates whether the transpose process is applied to palette indices of the current block of video data comprises a palette_transpose_flag syntax element.

4. The method of claim 1, wherein the one or more syntax elements related to delta QP comprise one or both of a syntax element that indicates an absolute value of a

difference between a QP of the current block and a predictor of the QP of the current block and a syntax element that indicates a sign of the difference between the QP of the current block and the predictor of the QP of the current block.

5. The method of claim 1, wherein the one or more syntax elements related to chroma QP offsets comprise one or both of a syntax element that indicates whether entries in one or more offset lists are added to a luma QP of the current block to determine chroma QPs for the current block and a syntax element that indicates an index of an entry in each of the one or more offset lists that are added to the luma QP for the current block to determine the chroma QPs for the current block.

6. The method of claim 1, wherein one or more of:

the one or more syntax elements that indicate a number of zeros that precede a non-zero entry in an array that indicates whether entries from a predictor palette are reused in the current palette comprise one or more palette_predictor_run syntax elements,

the syntax element that indicates a number of entries in the current palette that are explicitly signalled comprises a num_signalled_palette_entries syntax element,

the one or more syntax elements that each indicate a value of a component in an entry in the current palette comprise one or more palette_entry syntax elements,

the syntax element that indicates whether the current block of video data includes at least one escape coded sample comprises palette_escape_val_present_flag,

the syntax element that indicates a number of indices in the current palette that are explicitly signalled or inferred comprise a num_palette_indices_idc syntax element, and

the one or more syntax elements that indicate indices in an array of current palette entries comprise one or more palette_index_idc syntax elements.

7. The method of claim 1, wherein decoding the group of syntax elements comprises decoding the group of syntax elements from the coded video bitstream at a position in the coded video bitstream that is before the syntax element that indicates whether the transpose process is applied to palette indices of the current block of video data.

8. The method of claim 1, further comprising:

decoding, from the coded video bitstream after the group of syntax elements coded using Bypass mode, a syntax element that indicates a last occurrence of a run type flag within the current block of video data.

9. The method of claim 1, wherein decoding the syntax element that indicates the last occurrence of a run type flag within the current block of video data comprises decoding the syntax element that indicates the last occurrence of a run type flag within the current block of video data using context adaptive binary arithmetic coding (CABAC) with a context.

10. A device for encoding video data, the device comprising:

a memory configured to store video data; and

one or more processors configured to carry out the steps of claim 2.

11. A device for decoding video data, the device comprising:

a memory configured to store video data; and

one or more processors configured to carry out the steps of any one of claims 1, 3-9.

12. A device for decoding video data, the device comprising:

means for decoding, from a coded video bitstream and using context adaptive binary arithmetic coding (CABAC) with a context, a syntax element, palette_transpose_flag, that indicates whether a transpose process is applied to palette indices of a palette for a current block of video data;

means for decoding, from the coded video bitstream, using CABAC with a context and at a position in the coded video bitstream that is directly after the palette_transpose_flag, one or more syntax elements related to delta quantization parameter (QP) and/or chroma QP offsets for the current block of video data;

means for decoding, from the coded video bitstream, a group of consecutive syntax elements using Bypass mode, wherein the group comprises:

one or more syntax elements that indicate a number of zeros that precede a non-zero entry in an array that indicates whether entries from a predictor palette are reused in the current palette;

a syntax element that indicates a number of entries in the current palette that are explicitly signalled;

one or more syntax elements that each indicate a value of a component in an entry in the current palette;

a syntax element that indicates whether the current block of video data includes at least one escape coded sample;

a syntax element that indicates a number of indices in the current palette that are explicitly signalled or inferred; and

one or more syntax elements that indicate indices in an array of current palette entries; and

means for decoding the current block of video data based on the palette for the current block of video data, the group of syntax elements, and the one or more syntax elements related to delta QP and/or chroma QP offsets for the current block of video data.

13. A device for encoding video data, the device comprising:

means for encoding, in a coded video bitstream and using context adaptive binary arithmetic coding (CABAC) with a context, a syntax element, palette_transpose_flag, that indicates whether a transpose process is applied to palette indices of a palette for a current block of video data;

means for encoding, in the coded video bitstream, using CABAC with a context and at a position in the coded video bitstream that is directly after the palette_transpose_flag, one or more syntax elements related to delta quantization parameter (QP) and/or chroma QP offsets for the current block of video data;

means for encoding, in the coded video bitstream, a group of consecutive syntax elements using Bypass mode, wherein the group comprises:

one or more syntax elements that indicate a number of zeros that precede a non-zero entry in an array that indicates whether entries from a predictor palette are reused in the current palette;

a syntax element that indicates a number of entries in the current palette that are explicitly signalled;

one or more syntax elements that each indicate a value of a component in an entry in the current palette;

a syntax element that indicates whether the current block of video data includes at least one escape coded sample;

a syntax element that indicates a number of indices in the current palette that are explicitly signalled or inferred; and

one or more syntax elements that indicate indices in an array of current palette entries; and

means for encoding the current block of video data based on the palette for the current block of video data, the group of syntax elements, and the one or more syntax elements related to delta QP and/or chroma QP offsets for the current block of video data.

14. A computer-readable storage medium storing at least a portion of a coded video bitstream that, when processed by a video decoding device, cause one or more processors of the video decoding device to:

determine whether a transpose process is applied to palette indices of a palette for a current block of video data;

generate the palette for the current block of video data based on a following group of consecutive syntax elements in the portion of the coded video bitstream:

one or more syntax elements that indicate a number of zeros that precede a non-zero entry in an array that indicates whether entries from a predictor palette are reused in the current palette;

a syntax element that indicates a number of entries in the current palette that are explicitly signalled;

one or more syntax elements that each indicate a value of a component in an entry in the current palette;

a syntax element that indicates whether the current block of video data includes at least one escape coded sample;

a syntax element that indicates a number of indices in the current palette that are explicitly signalled or inferred; and

one or more syntax elements that indicate indices in an array of current palette entries; and

decode the current block of the video data based on the palette for the current block of video data and a delta quantization parameter (QP) and one or more chroma QP offsets for the current block of video data,

wherein one or more syntax elements related to the delta QP and one or more syntax elements related to the one or more chroma QP offsets for the current block of video data are located at a position in the portion of the coded video bitstream that is directly after a syntax element, palette_transpose_flag, that indicates whether the transpose process is applied to palette indices of the palette for the current block of video data, wherein the syntax element that indicates whether the transpose process is applied to palette indices of the palette for the current block of video data is decoded using context adaptive binary arithmetic coding (CABAC) with a context, wherein at least one of the one or more syntax elements related to the delta QP and one or more syntax elements related to the one or more chroma QP offsets is decoded using CABAC with a context, and wherein the group of consecutive syntax elements are decoded using Bypass mode.