

CLAIMS

What is claimed is:

1. A method implemented by a decoder, the method comprising:
receiving, by the decoder, a bitstream comprising a current picture and a reference picture list syntax structure (`ref_pic_list_struct()`) comprising a number of reference entries (`num_ref_entries`) constrained to a range of zero to a maximum decoded picture buffer size plus an offset; and
decoding, by the decoder, the current picture based on the `ref_pic_list_struct()` to produce a decoded picture.
2. The method of claim 1, wherein the `ref_pic_list_struct()` is referenced according to a list index (`listIdx`) and a reference picture list structure index (`rplIdx`), denoted as `ref_pic_list_struct(listIdx, rplIdx)`, wherein the `num_ref_entries` is denoted `num_ref_entries [ listIdx ][ rplIdx ]`, and wherein the `num_ref_entries [ listIdx ][ rplIdx ]` specifies a number of entries in the `ref_pic_list_struct( listIdx, rplIdx )`.
3. The method of any of claims 1-2, wherein a number of pictures in a set of reference pictures (`setOfRefPics`) referred to in the `ref_pic_list_struct` is constrained to be less than or equal to the maximum decoded picture buffer size minus one.
4. The method of any of claims 1-3, wherein the `ref_pic_list_struct()` includes a reference picture list zero (`RefPicList[0]`) and a reference picture list one (`RefPicList[1]`), and wherein the `setOfRefPics` is a set unique pictures referred to by all entries in `RefPicList[0]` that have a same network abstraction layer (NAL) unit header layer identifier (`nuh_layer_id`) as the current picture and all entries of in `RefPicList[1]` that have the same `nuh_layer_id` as the current picture.
5. The method of any of claims 1-4, wherein the `setOfRefPics` is a same set for all slices of each picture.

6. The method of any of claims 1-5, wherein the bitstream includes a decoded picture buffer parameter syntax structure (dpb_parameters()), wherein the dpb_parameters() comprises a maximum decoded picture buffer minus one (max_dec_pic_buffering_minus1), and wherein the maximum decoded picture buffer size corresponds to the max_dec_pic_buffering_minus1.
7. The method of any of claims 1-6, wherein the dpb_parameters() are included in a video parameter set (VPS) or a sequence parameter set (SPS).
8. A method implemented by an encoder, the method comprising:
encoding into a bitstream, by the encoder, a current picture based on a reference picture;
encoding into the bitstream, by the encoder, a reference picture list syntax structure (ref_pic_list_struct()) indicating the reference picture and comprising a number of reference entries (num_ref_entries) constrained to a range of zero to a maximum decoded picture buffer size plus an offset; and
storing, by the encoder, the bitstream for communication toward a decoder.
9. The method of claim 8, wherein the ref_pic_list_struct() is referenced according to a list index (listIdx) and a reference picture list structure index (rplsIdx), denoted as ref_pic_list_struct(listIdx, rplsIdx), wherein the num_ref_entries is denoted num_ref_entries [listIdx][rplsIdx], and wherein the num_ref_entries [listIdx][rplsIdx] specifies a number of entries in the ref_pic_list_struct(listIdx, rplsIdx).
10. The method of any of claims 8-9, wherein a number of pictures in a set of reference pictures (setOfRefPics) referred to in the ref_pic_list_struct is constrained to be less than or equal to the maximum decoded picture buffer size minus one.
11. The method of any of claims 8-10, wherein the ref_pic_list_struct() includes a reference picture list zero (RefPicList[0]) and a reference picture list one (RefPicList[1]), and wherein the setOfRefPics is a set unique pictures referred to by all entries in RefPicList[0] that have a same network abstraction layer (NAL) unit header layer identifier (nuh_layer_id) as the current picture and all entries of in RefPicList[1] that have the same nuh_layer_id as the current picture

12. The method of any of claims 8-11, wherein the setOfRefPics is a same set for all slices of each picture.
13. The method of any of claims 8-12, wherein the bitstream includes a decoded picture buffer parameter syntax structure (dpb_parameters()), wherein the dpb_parameters() comprises a maximum decoded picture buffer minus one (max_dec_pic_buffering_minus1), and wherein the maximum decoded picture buffer size corresponds to the max_dec_pic_buffering_minus1.
14. The method of any of claims 8-13, wherein the dpb_parameters() are included in a video parameter set (VPS) or a sequence parameter set (SPS).
15. A video coding device comprising:
a processor, a receiver coupled to the processor, a memory coupled to the processor, and a transmitter coupled to the processor, wherein the processor, receiver, memory, and transmitter are configured to perform the method of any of claims 1-14.
16. A non-transitory computer readable medium comprising a computer program product for use by a video coding device, the computer program product comprising computer executable instructions stored on the non-transitory computer readable medium such that when executed by a processor cause the video coding device to perform the method of any of claims 1-14.
17. A decoder comprising:
a receiving means for receiving a bitstream comprising a current picture and a reference picture list syntax structure (ref_pic_list_struct()) comprising a number of reference entries (num_ref_entries) constrained to a range of zero to a maximum decoded picture buffer size plus an offset;
a decoding means for decoding the current picture based on the ref_pic_list_struct() to produce a decoded picture.
18. The decoder of claim 17, wherein the decoder is further configured to perform the method of any of claims 1-7.

19. An encoder comprising:
an encoding means for:
encoding into a bitstream a current picture based on a reference picture; and
encoding into the bitstream a reference picture list syntax structure (ref_pic_list_struct()) indicating the reference picture and comprising a number of reference entries (num_ref_entries) constrained to a range of zero to a maximum decoded picture buffer size plus an offset; and
a storing means for storing the bitstream for communication toward a decoder.
20. The encoder of claim 19, wherein the encoder is further configured to perform the method of any of claims 8-14.