

CLAIMS

1. A method of processing video data, comprising:
performing a conversion between a current access unit of a video comprising one or more output layer sets (OLSs) and a bitstream of the video according to a rule,
wherein a subpicture level information (SLI) supplemental enhancement information (SEI) message includes information about a level of subpicture sequences in a set of coded video sequences of the one or more OLSs to which the SLI SEI message applies, wherein layers in the one or more OLSs for which a variable in a referenced sequence parameter set indicating that a number of subpictures is greater than 1 are referred to as multi-subpicture layers,
wherein coded video sequences in the set of the OLSs are referred to as target coded video sequences (CVSs), and
wherein the rule specifies that a subpicture sequence includes (1) all subpictures within the target CVSs that have a same subpicture index and belong to layers in the multi-subpicture layers, and (2) all subpictures in the target CVSs that have a subpicture index of 0 and belong to layers of the OLSs but not in the multi-subpicture layers.
2. The method of claim 1, wherein the bitstream confirms to a formatting rule specifying that, in response to the SLI SEI message being present for a coded video sequence, all sequence parameter sets referenced by pictures in the multi-subpicture layers have a same number of subpictures.
3. The method of claim 1 or 2, wherein, in response to the SLI SEI message being present for any access unit of a coded video sequence (CVS) of the one or more OLSs, the rule specifies that the SLI SEI message is present for a first access unit of the CVS.
4. The method of any of claims 1 to 3, wherein a syntax element in a syntax structure of the SLI SEI message specifies a number of subpictures in a picture in the multi-subpicture layers in the target CVSs.

5. The method of any of claims 1 to 4, wherein the conversion comprises encoding the video into the bitstream.
6. The method of any of claims 1 to 4, wherein the conversion comprises decoding the video from the bitstream.
7. A method for storing bitstream of a video, comprising:
 - generating a bitstream of the video from the video comprising one or more output layer sets (OLSs) according to a rule, and
 - storing the generated bitstream,
 - wherein a subpicture level information (SLI) supplemental enhancement information (SEI) message includes information about a level of subpicture sequences in a set of coded video sequences of the one or more OLSs to which the SLI SEI message applies, wherein layers in the one or more OLSs for which a variable in a referenced sequence parameter set indicating that a number of subpictures is greater than 1 are referred to as multi-subpicture layers,
 - wherein coded video sequences in the set of the OLSs are referred to as target coded video sequences (CVSs), and
 - wherein the rule specifies that a subpicture sequence includes (1) all subpictures within the target CVSs that have a same subpicture index and belong to layers in the multi-subpicture layers, and (2) all subpictures in the target CVSs that have a subpicture index of 0 and belong to layers of the OLSs but not in the multi-subpicture layers.
8. A video decoding apparatus comprising a processor configured to implement a method recited in one or more of claims 1 to 7.
9. A video encoding apparatus comprising a processor configured to implement a method recited in one or more of claims 1 to 7.
10. A computer program product having computer code stored thereon, the code, when executed by a processor, causes the processor to implement a method recited in any of claims 1 to 7.

11. A non-transitory computer-readable recording medium storing a bitstream of a video which is generated by a method performed by a video processing apparatus, wherein the method comprises:

generating a bitstream of the video from the video comprising one or more output layer sets (OLSs) according to a rule, and

storing the generated bitstream,

wherein a subpicture level information (SLI) supplemental enhancement information (SEI) message includes information about a level of subpicture sequences in a set of coded video sequences of the one or more OLSs to which the SLI SEI message applies, wherein layers in the one or more OLSs for which a variable in a referenced sequence parameter set indicating that a number of subpictures is greater than 1 are referred to as multi-subpicture layers,

wherein coded video sequences in the set of the OLSs are referred to as target coded video sequences (CVSs), and

wherein the rule specifies that a subpicture sequence includes (1) all subpictures within the target CVSs that have a same subpicture index and belong to layers in the multi-subpicture layers, and (2) all subpictures in the target CVSs that have a subpicture index of 0 and belong to layers of the OLSs but not in the multi-subpicture layers.