

CLAIMS

What is claimed is:

1. A method implemented by a decoder, the method comprising:
receiving, by a receiver of the decoder, a bitstream comprising a coded picture and a supplemental enhancement information (SEI) network abstraction layer (NAL) unit with a NAL unit type (nal_unit_type) equal to a suffix SEI NAL unit type (SUFFIX_SEI_NUT) and containing a scalable nesting SEI message; and
decoding, by a processor of the decoder, the coded picture to produce a decoded picture.
2. The method of claim 1, wherein the scalable nesting SEI message contains one or more scalable-nested SEI messages.
3. The method of any of claims 1-2, wherein the one or more scalable-nested SEI messages include a decoded picture hash SEI message.
4. The method of any of claims 1-3, wherein the scalable nesting SEI message associates SEI messages with specific output layer sets (OLSs).
5. The method of any of claims 1-4, wherein the scalable nesting SEI message associates SEI messages with specific layers.
6. The method of any of claims 1-5, wherein the scalable nesting SEI message includes a payload type (payloadType) set to one hundred thirty-three.
7. The method of any of claims 1-6, wherein the scalable nesting SEI message includes a scalable nesting layer identifier (layer_id[i]) that specifies a NAL unit header layer identifier (nuh_layer_id) value of a i-th layer to which the scalable-nested SEI messages apply.
8. A non-transitory computer-readable medium storing computer instructions that when executed by at least one hardware processors, cause the at least one hardware processors to perform the method of any one of claims 1 to 7.
9. A decoding device, comprising:

a receiver configured to receive a bitstream comprising a coded picture and a supplemental enhancement information (SEI) network abstraction layer (NAL) unit with a NAL unit type (nal_unit_type) equal to a suffix SEI NAL unit type (SUFFIX_SEI_NUT) and containing a scalable nesting SEI message;

a memory coupled to the receiver, the memory storing instructions; and

a processor coupled to the memory, the processor configured to execute the instructions to cause the decoding device to: perform the method according to any one of claims 1 to 7.

8. — ~~A method implemented by an encoder, the method comprising:~~

~~encoding, by a processor of the encoder, one or more coded pictures into a bitstream;~~

~~encoding into the bitstream, by the processor, a supplemental enhancement information (SEI) network abstraction layer (NAL) unit with a NAL unit type (nal_unit_type) equal to a suffix SEI NAL unit type (SUFFIX_SEI_NUT) and containing a scalable nesting SEI message;~~

~~performing, by the processor, a set of bitstream conformance tests on the bitstream based on the scalable nesting SEI message; and~~

~~storing, by a memory coupled to the processor, the bitstream for communication toward a decoder.~~

9. — ~~The method of claim 8, wherein the scalable nesting SEI message contains one or more scalable-nested SEI messages.~~

10. — ~~The method of any of claims 8-9, wherein the one or more scalable-nested SEI messages include a decoded picture hash SEI message.~~

11. — ~~The method of any of claims 8-10, wherein the scalable nesting SEI message associates SEI messages with specific output layer sets (OLSs).~~

12. — ~~The method of any of claims 8-11, wherein the scalable nesting SEI message associates SEI messages with specific layers.~~

13. — ~~The method of any of claims 8-12, wherein the scalable nesting SEI message includes a payload-type (payloadType) set to one hundred thirty-three.~~

14. — The method of any of claims 8-13, wherein the scalable nesting SEI message includes a scalable nesting layer identifier (`layer_id[i]`) that specifies a NAL unit header layer identifier (`nuh_layer_id`) value of an *i*-th layer to which the scalable nested SEI messages apply.

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 coded picture and a supplemental enhancement information (SEI) network abstraction layer (NAL) unit with a NAL unit type (`nal_unit_type`) equal to a suffix SEI NAL unit type (`SUFFIX_SEI_NUT`) and containing a scalable nesting SEI message;

— a decoding means for decoding the coded picture to produce a decoded picture; and

— a forwarding means for forwarding the decoded picture for display as part of a decoded video sequence.

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 one or more coded pictures into a bitstream; and

— encoding into the bitstream a supplemental enhancement information (SEI) network abstraction layer (NAL) unit with a NAL unit type (`nal_unit_type`) equal to a suffix SEI NAL unit type (`SUFFIX_SEI_NUT`) and containing a scalable nesting SEI message;

~~a hypothetical reference decoder (HRD) means for performing a set of bitstream conformance tests on the bitstream based on the scalable nesting SEI message; 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.~~