SUMMARY

[0007] Some embodiments proceed from the consideration that an indication of an order of a texture view component and a depth view component in an access unit can be provided and encoded to a bitstream, and coding of the texture view component and the depth view component may be adapted on the basis of the order of the texture view component and the depth view component.

[0008] Various aspects of examples of the invention are provided in the detailed description.

[0009] Herein disclosed is a method comprising:

obtaining at least one view component of a first type and at least one view component of a second type of a view;

determining a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

encoding at least one indication of the view component order; and

adapting coding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order.

[0009a] According to a first aspect, there is provided a method comprising:

~~obtaining at least one view component of a first type and at least one view component of a second type;~~

~~determining a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;~~

~~encoding at least one indication of the view component order; and~~

~~adapting coding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said adapting comprises selecting at least one of the following for encoding:~~

~~a coding tool among a set of coding tools;~~

~~a coding mode among a set of coding modes;~~

~~one or more coding parameters.~~

obtaining at least one view component of a first type and at least one view component of a second type; determining a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit; encoding at least one indication of the view component order; and adaptively coding one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said adaptively coding comprises selecting, in accordance with the view component order, at least one of the following for coding: a coding tool among a set of coding tools; a coding mode among a set of coding modes; one or more coding parameters, wherein the at least one view component of a second type comprises at least a depth view component; the at least one view component of a first type comprises at least a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the

texture view components, which appear in the access unit in an order determined by their view order index, and wherein the depth view component of a view precedes in the view component order the texture view component of the same view, wherein the adaptively coding comprises: selecting a coding tool which uses inter-component dependency from the depth view component to the texture view component; encoding an indication of the selected coding tool; and providing the depth view component in a base layer and providing the texture view component in an enhancement layer.

[0009b] According to a second aspect, there is provided a method comprising: obtaining at least one view component of a first type and at least one view component of a second type; determining a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit; encoding at least one indication of the view component order; and adaptively coding one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said adaptively coding comprises selecting, in accordance with the view component order, at least one of the following for coding: a coding tool among a set of coding tools; a coding mode among a set of coding modes; one or more coding parameters, wherein the at least one view component of a second type comprises at least a depth view component; the at least one view component of a first type comprises at least a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index, and wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, wherein the adaptively coding comprises: selecting a coding tool which uses inter-component dependency from the texture view component to the depth view component; encoding a second indication indicative of the selected coding tool; and providing the texture view component in a base layer and providing the depth view component in an enhancement layer

[0010] Herein disclosed is an apparatus comprising at least one processor and at least one memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to:

obtain at least one view component of a first type and at least one view component of a second type of a view;

determine a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

encode at least one indication of the view component order; and

adapt coding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order.

[0010a] According to a ~~second~~ third aspect, there is provided an apparatus comprising at least one processor and at least one memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to:

obtain at least one view component of a first type and at least one view component of a second type;

determine a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

encode at least one indication of the view component order; and ~~adapt~~adaptively coding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order by selecting, in accordance with the view component order, at least one of the following for ~~encoding~~:

a coding tool among a set of coding tools;

a coding mode among a set of coding modes;

one or more coding parameters.

[0011] Herein disclosed is a computer program product including one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following:

obtain at least one view component of a first type and at least one view component of a second type of a view;

determine a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

encode at least one indication of the view component order; and

adapt coding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order.

[0011a] According to a ~~third~~ fourth aspect, there is provided a computer program product including one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following:

obtain at least one view component of a first type and at least one view component of a second type;

determine a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

encode at least one indication of the view component order; and

~~adapt coding~~adaptively code ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order by selecting, in accordance with the view component order, at least one of the following for ~~encoding~~:

a coding tool among a set of coding tools;

a coding mode among a set of coding modes;
one or more coding parameters.

[0012] Herein disclosed is an apparatus comprising:

means for obtaining at least one view component of a first type and at least one view component of a second type of a view;

means for determining a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

means for encoding at least one indication of the view component order; and

means for adapting coding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order.

[0012a] According to a ~~fourth~~ fifth aspect, there is provided an apparatus comprising:

means for obtaining at least one view component of a first type and at least one view component of a second type;

means for determining a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

means for encoding at least one indication of the view component order; and

means for ~~adapting~~ adaptively coding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said means for ~~adapting~~ adaptively coding comprises means for selecting, in accordance with the view component order, at least one of the following for ~~en~~coding:

a coding tool among a set of coding tools;

a coding mode among a set of coding modes;

one or more coding parameters.

[0013] Herein disclosed is a method comprising:

receiving at least one encoded view component of a first type and at least one encoded view component of a second type of a view;

receiving at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type; and

decoding the at least one encoded indication of the view component order; and

adapting decoding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order.

[0013a] According to a ~~fifth~~ sixth aspect, there is provided a method comprising:

receiving at least one encoded view component of a first type and at least one encoded view component of a second type;

receiving at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type; and

decoding the at least one encoded indication of the view component order; and

~~adapting~~ adaptively decoding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said ~~adapting~~ adaptively decoding comprises selecting, in accordance with the view component order, at least one of the following for decoding:

a decoding tool among a set of decoding tools;

a decoding mode among a set of decoding modes;

one or more decoding parameters.

[0014] Herein disclosed is an apparatus comprising at least one processor and at least one memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to:

receive at least one view component of a first type and at least one view component of a second type of a view;

receive at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type ;

decode the at least one encoded indication of the view component order; and

adapt decoding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order.

[0014a] According to a ~~sixth~~ seventh aspect, there is provided an apparatus comprising at least one processor and at least one memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to:

receive at least one view component of a first type and at least one view component of a second type;

receive at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type ;

decode the at least one encoded indication of the view component order; and

~~adapt~~ adaptively decoding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order by selecting, in accordance with the view component order, at least one of the following for decoding:

a decoding tool among a set of decoding tools;

a decoding mode among a set of decoding modes;

one or more decoding parameters.

[0015] Herein disclosed is a computer program product including one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following:

receive at least one view component of a first type and at least one view component of a second type of a view;

receive at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type;

decode the at least one encoded indication of the view component order; and

adapt decoding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order.

[0015a] According to a ~~seventh~~ eighth aspect, there is provided a computer program product including one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following:

receive at least one view component of a first type and at least one view component of a second type;

receive at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type;

decode the at least one encoded indication of the view component order; and

~~adapt~~ adaptively decoding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order by selecting, in accordance with the view component order, at least one of the following for decoding:

a decoding tool among a set of decoding tools;

a decoding mode among a set of decoding modes;

one or more decoding parameters.

[0016] Herein disclosed is an apparatus comprising:

means for receiving at least one encoded view component of a first type and at least one encoded view component of a second type of a view;

means for receiving at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type; and

means for decoding the at least one encoded indication of the view component order; and

means for adapting decoding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order.

[0016a] According to a ~~eighth~~ ninth aspect there is provided an apparatus comprising:

means for receiving at least one encoded view component of a first type and at least one encoded view component of a second type;

means for receiving at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type; and

means for decoding the at least one encoded indication of the view component order; and

means for ~~adapting~~ adaptively decoding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said means for ~~adapting~~ adaptively decoding comprises means for, in accordance with the view component order, selecting at least one of the following for decoding:

a decoding tool among a set of decoding tools;

a decoding mode among a set of decoding modes;

one or more decoding parameters.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] For a more complete understanding of example embodiments of the present invention, reference is now made to the following descriptions taken in connection with the accompanying drawings in which:

[0018] Figure 1 shows schematically an electronic device employing some embodiments of the invention;

[0019] Figure 2 shows schematically a user equipment suitable for employing some embodiments of the invention;

[0020] Figure 3 further shows schematically electronic devices employing embodiments of the invention connected using wireless and wired network connections;

[0021] Figure 4a shows schematically an embodiment of the invention as incorporated within an encoder;

[0022] Figure 4b shows schematically an embodiment of an inter predictor according to some embodiments of the invention;

[0023] Figure 5 shows a simplified model of a DIBR-based 3DV system;

[0024] Figure 6 shows a simplified 2D model of a stereoscopic camera setup;

[0025] Figure 7 shows an example of definition and coding order of access units;

[0026] Figure 8 shows a high level flow chart of an embodiment of an encoder capable of encoding texture views and depth views;

[0027] Figure 9 shows a high level flow chart of an embodiment of a decoder capable of decoding texture views and depth views;

[0028] Figure 10 shows an example processing flow for depth map coding within an encoder;

[0029] Figure 11 shows an example of coding of two depth map views with in-loop implementation of an encoder;

[0030] Figure 12 shows an example of joint multiview video and depth coding of anchor pictures;

[0031] Figure 13 shows an example of joint multiview video and depth coding of non-anchor pictures;

We claim:

1. A method comprising:

obtaining at least one view component of a first type and at least one view component of a second type;

determining a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

encoding at least one indication of the view component order; and

~~adapting~~ adaptively coding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said adaptively coding ~~adapting~~ comprises selecting, in accordance with the view component order, at least one of the following for ~~en~~coding:

a coding tool among a set of coding tools;

a coding mode among a set of coding modes;

one or more coding parameters,

wherein the at least one view component of a second type comprises at least a depth view component; the at least one view component of a first type comprises at least a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index, and

wherein the depth view component of a view precedes in the view component order the texture view component of the same view, wherein the adaptively coding comprises:

selecting a coding tool which uses inter-component dependency from the depth view component to the texture view component;

encoding an indication of the selected coding tool; and

providing the depth view component in a base layer and providing the texture view component in an enhancement layer.

2. A method comprising:

obtaining at least one view component of a first type and at least one view component of a second type;

determining a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

encoding at least one indication of the view component order; and

adaptively coding one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said adaptively coding comprises selecting, in accordance with the view component order, at least one of the following for coding:

a coding tool among a set of coding tools;

a coding mode among a set of coding modes;

one or more coding parameters,

wherein the at least one view component of a second type comprises at least a depth view component; the at least one view component of a first type comprises at least a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index, and

wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, wherein the adaptively coding comprises:

selecting a coding tool which uses inter-component dependency from the texture view component to the depth view component;

encoding a second indication indicative of the selected coding tool; and

providing the texture view component in a base layer and providing the depth view component in an enhancement layer

~~23~~. The method according to claim 1 or 2, wherein the at least one indication of the view component order is encoded in at least one of the following:

a group of slices parameter set syntax structure;

a video parameter set;

a sequence parameter set.

~~3. The method according to claim 1 or 2, wherein the second type is a depth view component; and the first type is a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index.~~

~~4. The method according to claim 3, wherein the depth view component of a view precedes in the view component order the texture view component of the same view, wherein the adapting coding comprises at least one of:~~

~~selecting a coding tool which uses inter-component dependency from the depth view component to the texture view component;~~

~~encoding an indication of the selected coding tool;~~

~~providing the depth view component in a base layer and providing the texture view component in an enhancement layer.~~

~~5. The method according to claim 3, wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, wherein the adapting coding comprises at least one of:~~

~~selecting a coding tool which uses inter-component dependency from the texture view component to the depth view component;~~

~~encoding a second indication indicative of the selected coding tool;~~

~~providing the texture view component in a base layer and providing the depth view component in an enhancement layer.~~

64. An apparatus comprising at least one processor and at least one memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to:

obtain at least one view component of a first type and at least one view component of a second type;

determine a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

encode at least one indication of the view component order; and

adaptively codeing of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order by selecting, in accordance with the view component order, at least one of the following for encoding:

a coding tool among a set of coding tools;

a coding mode among a set of coding modes;

one or more coding parameters.

75. The apparatus according to claim 64, said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to encode the at least one indication of the view component order in at least one of the following:

a group of slices parameter set syntax structure;

a video parameter set;

a sequence parameter set.

86. The apparatus according to claim ~~6~~4 or 75, wherein the second type is a depth view component; and the first type is a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index.

97. The apparatus according to claim 86, wherein the depth view component of a view precedes in the view component order the texture view component of the same view, wherein said at

least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to perform ~~at least one of~~:

selecting a coding tool which uses inter-component dependency from the depth view component to the texture view component;

encoding an indication of the selected coding tool; and

providing the depth view component in a base layer and providing the texture view component in an enhancement layer.

~~108~~. The apparatus according to claim ~~86~~, wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, wherein said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to perform ~~at least one of~~:

selecting a coding tool which uses inter-component dependency from the texture view component to the depth view component;

encoding a second indication indicative of the selected coding tool; and

providing the texture view component in a base layer and providing the depth view component in an enhancement layer.

~~119~~. A computer program product including one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following:

obtain at least one view component of a first type and at least one view component of a second type;

determine a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

encode at least one indication of the view component order; and

adaptively cod~~ing of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order by selecting, in accordance with the view component order, at least one of the following for ~~en~~coding:

a coding tool among a set of coding tools;

a coding mode among a set of coding modes;

one or more coding parameters.

~~1210~~. The computer program product according to claim ~~119~~, said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to encode the at least one indication of the view component order in at least one of the following:

a group of slices parameter set syntax structure;

a video parameter set;

a sequence parameter set.

~~13~~11. The computer program product according to claim ~~11~~9 or ~~12~~10, wherein the second type is a depth view component; and the first type is a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index.

~~14~~12. The computer program product according to claim ~~13~~11, the depth view component of a view precedes in the view component order the texture view component of the same view, wherein said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to perform ~~at least one of~~:

selecting a coding tool which uses inter-component dependency from the depth view component to the texture view component;

encoding an indication of the selected coding tool; and

providing the depth view component in a base layer and providing the texture view component in an enhancement layer.

~~15~~13. The computer program product according to claim ~~13~~11, wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, wherein said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to perform ~~at least one of~~:

selecting a coding tool which uses inter-component dependency from the texture view component to the depth view component;

encoding a second indication indicative of the selected coding tool; and

providing the texture view component in a base layer and providing the depth view component in an enhancement layer.

~~16~~14. An apparatus comprising:

means for obtaining at least one view component of a first type and at least one view component of a second type;

means for determining a view component order of the at least one view component of the first type and the at least one view component of the second type in an access unit;

means for encoding at least one indication of the view component order; and

means for adaptive~~ly~~~~ng~~ coding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said means for adaptively coding~~ng~~ comprises means for selecting, in accordance with the view component order, at least one of the following for encoding:

a coding tool among a set of coding tools;

a coding mode among a set of coding modes;

one or more coding parameters.

~~17~~15. The apparatus according to claim ~~16~~14, wherein the apparatus comprises means for encoding the at least one indication of the view component order in at least one of the following:

a group of slices parameter set syntax structure;

a video parameter set;

a sequence parameter set.

~~18~~16. The apparatus according to claim ~~16 or 17~~14 or 15, wherein the second type is a depth view component; and the first type is a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index.

~~19~~17. The apparatus according to claim ~~18~~16, wherein the depth view component of a view precedes in the view component order the texture view component of the same view, wherein the means for adapting coding comprises means for performing ~~at least one of~~:

selecting a coding tool which uses inter-component dependency from the depth view component to the texture view component;

encoding an indication of the selected coding tool; and

providing the depth view component in a base layer and providing the texture view component in an enhancement layer.

~~20~~18. The apparatus according to claim ~~18~~16, wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, wherein the means for adapting coding comprises means for performing ~~at least one of~~:

selecting a coding tool which uses inter-component dependency from the texture view component to the depth view component;

encoding a second indication indicative of the selected coding tool; and

providing the texture view component in a base layer and providing the depth view component in an enhancement layer.

~~21~~19. A method comprising:

receiving at least one encoded view component of a first type and at least one encoded view component of a second type;

receiving at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type; and

decoding the at least one encoded indication of the view component order; and

~~adapting~~ adaptively decoding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said adaptively ~~decoding~~ing comprises selecting, in accordance with the view component order, at least one of the following for decoding:

a decoding tool among a set of decoding tools;

a decoding mode among a set of decoding modes;

one or more decoding parameters.

~~2220~~. The method according to claim ~~2119~~, wherein the at least one indication of the view component order is decoded from at least one of the following:

a group of slices parameter set syntax structure;

a video parameter set;

a sequence parameter set.

~~2321~~. The method according to claim ~~2119~~ or ~~2220~~, wherein the second type is a depth view component; and the first type is a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index.

~~2422~~. The method according to claim ~~2321~~, wherein the depth view component of a view precedes in the view component order the texture view component of the same view, wherein the adapting decoding comprises ~~at least one of~~:

selecting a decoding tool which uses inter-component dependency from the depth view component to the texture view component;

~~encoding~~ decoding an indication of the selected decoding tool; and

receiving the depth view component in a base layer and receiving the texture view component in an enhancement layer.

~~2523~~. The method according to claim ~~2321~~, wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, wherein the adapting decoding comprises ~~at least one of~~:

selecting a decoding tool which uses inter-component dependency from the texture view component to the depth view component; ~~and~~

decoding a second indication indicative of the selected decoding tool; and

receiving the depth view component in a base layer and receiving the texture view component in an enhancement layer.

2624. An apparatus comprising at least one processor and at least one memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to:

receive at least one view component of a first type and at least one view component of a second type;

receive at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type ;

decode the at least one encoded indication of the view component order; and

adaptively decoding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order by selecting, in accordance with the view component order, at least one of the following for decoding:

a decoding tool among a set of decoding tools;

a decoding mode among a set of decoding modes;

one or more decoding parameters.

2725. The apparatus according to claim 2624, said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to decode the at least one indication of the view component order from at least one of the following:

a group of slices parameter set syntax structure;

a video parameter set;

a sequence parameter set.

2826. The apparatus according to claim 26-24 or 2725, wherein the second type is a depth view component; and the first type is a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index.

2927. The apparatus according to claim 2826, wherein the depth view component of a view precedes in the view component order the texture view component of the same view, said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to perform ~~at least one of~~:

selecting a decoding tool which uses inter-component dependency from the depth view component to the texture view component;

~~encoding~~ decoding an indication of the selected decoding tool; and

receiving the depth view component in a base layer and receiving the texture view component in an enhancement layer.

3028. The apparatus according to claim 2826, wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to perform at least one of:

selecting a decoding tool which uses inter-component dependency from the texture view component to the depth view component; and

decoding a second indication indicative of the selected decoding tool; and

receiving the depth view component in a base layer and receiving the texture view component in an enhancement layer.

3129. A computer program product including one or more sequences of one or more instructions which, when executed by one or more processors, cause an apparatus to at least perform the following:

receive at least one view component of a first type and at least one view component of a second type;

receive at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type;

decode the at least one encoded indication of the view component order; and

adaptively decoding of one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order by selecting, in accordance with the view component order, at least one of the following for decoding:

a decoding tool among a set of decoding tools;

a decoding mode among a set of decoding modes;

one or more decoding parameters.

3230. The computer program product according to claim 3129, said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to decode the at least one indication of the view component order from at least one of the following:

a group of slices parameter set syntax structure;

a video parameter set;

a sequence parameter set.

3331. The computer program product according to claim 31-29 or 3230, wherein the second type is a depth view component; and the first type is a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index.

~~34~~32. The computer program product according to claim ~~33~~31, wherein the depth view component of a view precedes in the view component order the texture view component of the same view, said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to perform ~~at least one of~~:

selecting a decoding tool which uses inter-component dependency from the depth view component to the texture view component;

~~encoding~~ decoding an indication of the selected decoding tool; and

receiving the depth view component in a base layer and receiving the texture view component in an enhancement layer.

~~35~~33. The computer program product according to claim ~~33~~31, wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, said at least one memory stored with code thereon, which when executed by said at least one processor, further causes the apparatus to perform ~~at least one of~~:

selecting a decoding tool which uses inter-component dependency from the texture view component to the depth view component; ~~and~~

decoding a second indication indicative of the selected decoding tool; and

receiving the depth view component in a base layer and receiving the texture view component in an enhancement layer.

~~36~~34. An apparatus comprising:

means for receiving at least one encoded view component of a first type and at least one encoded view component of a second type;

means for receiving at least one encoded indication of a view component order of the at least one view component of the first type and the at least one view component of the second type; and

means for decoding the at least one encoded indication of the view component order; and

means for adaptive~~ly~~~~ing~~ decoding ~~of~~ one or both of the at least one view component of the first type and the at least one view component of the second type on the basis of the view component order, wherein said means for ~~adapting~~ adaptively decoding comprises means for selecting, in accordance with the view component order, at least one of the following for decoding:

a decoding tool among a set of decoding tools;

a decoding mode among a set of decoding modes;

one or more decoding parameters.

~~37~~35. The apparatus according to claim ~~36~~34 comprising means for decoding the at least one indication of the view component order from at least one of the following:

a group of slices parameter set syntax structure;

a video parameter set;

a sequence parameter set.

3836. The apparatus according to claim 36 34 or 3735, wherein the second type is a depth view component; and the first type is a texture view component; and the at least one indication indicates how depth view components are located or interleaved in relation to the texture view components, which appear in the access unit in an order determined by their view order index.

3937. The apparatus according to claim 3836, wherein the depth view component of a view precedes in the view component order the texture view component of the same view, wherein the apparatus comprises means for performing at least one of:

selecting a decoding tool which uses inter-component dependency from the depth view component to the texture view component;

encoding decoding an indication of the selected decoding tool; and

receiving the depth view component in a base layer and receiving the texture view component in an enhancement layer.

4038. The apparatus according to claim 3836, wherein the depth view component of a view succeeds in access unit view component order the texture view component of the same view, wherein the apparatus comprises means for performing at least one of:

selecting a decoding tool which uses inter-component dependency from the texture view component to the depth view component; and

decoding a second indication indicative of the selected decoding tool; and

receiving the depth view component in a base layer and receiving the texture view component in an enhancement layer.