

CLAIMS

1. A method for outputting an image based on an image file, the method comprising:
 - obtaining the image file including at least (i) one or more properties which are identified, the at least one or more properties being listed in a same box, and (ii) association information for associating identification information of each of the one or more properties and identification information of each of one or more still images; and
 - outputting an image based on the obtained image file.
2. The method according to claim 1, wherein all properties of each of the one or more still images are listed in the same box.
3. The method according to claim 1 or 2, wherein the at least one or more properties are directly listed in the same box.
4. The method according to any one of claims 1 to 3, wherein:
 - the image file further includes “ItemInfoBox” for representing information for each of the one or more still images, and
 - the association information for associating the identification information of each of the one or more properties and the identification information of each of the one or more still images are described in a predetermined box different from said same box.

5. The method according to claim 4, wherein “ispe” indicating a width and a height of the one or more still images is described as said property in the same box which is different from said “ItemInfoBox”, and wherein the association information associates the identification information of each of the one or more still images and the identification information of each of one or more “ispe”.
6. The method according to claim 4, wherein “hvcC” indicating a decoder configuration of the one or more still images is described as said property in the same box which is different from said “ItemInfoBox”, and wherein the association information associates the identification information of each of the one or more still images and the identification information of each of one or more “hvcC”.
7. The method according to claim 4, wherein the association information represents correspondence between identification information of one of the one or more properties which are identified and identification information corresponding to at least two images.
8. The method according to any one of claims 1 to 7, wherein the image file is generated based on a plurality of still images.
9. The method according to any one of claims 1 to 7, wherein the image file is generated based on a plurality of sub-images corresponding to one still image.

10. The method according to any one of claims 1 to 9, wherein the image file comprises a metadata part and a media data part, and wherein both of the one or more properties and the association information are described in the metadata part.
11. The method according to any one of claims 1 to 10, wherein the identified properties are ordered, the identification information of each of the one or more properties corresponding to its order.
12. A computer-readable storage medium storing instructions of a computer program for implementing a method according to any one of claims 1 to 11.
13. A computing device for outputting an image based on an image file, the computing device comprising a central processing unit and a network interface, wherein the central processing unit is configured to:
 - obtain the image file including at least (i) one or more properties which are identified, the at least one or more properties being listed in a same box, and (ii) association information for associating identification information of each of the one or more properties and identification information of each of one or more still images; and
 - output, via the network interface, an image based on the obtained image file.
14. The computing device according to claim 13, wherein all properties of each of the one or more still images are listed in the same box.

15. The computing device according to one of claims 13 to 14, wherein the at least one or more properties are directly listed in the same box.
16. The computing device according to one of claims 13 to 15, wherein:
 - the image file further includes “ItemInfoBox” for representing information for each of the one or more still images, and
 - the association information for associating the identification information of each of the one or more properties and the identification information of each of the one or more still images are described in a predetermined box different from said same box.
17. The computing device according claim 16, wherein “ispe” indicating a width and a height of the one or more still images is described as said property in the same box which is different from said “ItemInfoBox”, and wherein the association information associates the identification information of each of the one or more still images and the identification information of each of one or more “ispe”.
18. The computing device according claim 16, wherein “hvcC” indicating a decoder configuration of the one or more still images is described as said property in the same box which is different from said “ItemInfoBox”, and wherein the association information associates the identification information of each of the one or more still images and the identification information of each of one or more “hvcC”.

19. The computing device according claim 16, wherein the association information represents correspondence between identification information of one of the one or more properties which are identified and identification information corresponding to at least two images.
20. The computing device according to one of claims 13 to 19, wherein the image file is generated based on a plurality of still images.
21. The computing device according to one of claims 13 to 19, wherein the image file is generated based on a plurality of sub-images corresponding to one still image.
22. The computing device according to one of claims 13 to 21, wherein the image file comprises a metadata part and a media data part, and wherein both of the one or more properties and the association information are described in the metadata part.
23. The computing device according to one of claims 13 to 22, wherein the identified properties are ordered, the identification information of each of the one or more properties corresponding to its order.
24. The computing device according to one of claims 13 to 23, wherein the computing device is at least one of a micro-computer, a workstation, a camera, a smartphone, and a tablet.

25. The computing device according to one of claims 13 to 23, wherein the image file is outputted to at least one of:
- a first bitstream for adaptive streaming by a server device;
 - a second bitstream for transmission to a display device for display; and
 - a third bitstream for transmission to a client device.