

CLAIMS

1. A method for an image generation, the method comprising:
 - receiving an image generation request, wherein the image generation request comprises an image format of an image awaiting generation (S210);
 - retrieving a static image based on the image generation request (S220);
 - determining a plurality of sub-images awaiting generation of the image awaiting generation based on the image format (S230);
 - retrieving description information of each sub-image awaiting generation, and sorting the plurality of sub-images awaiting generation based on the description information (S240); and
 - for each particular sub-image in the plurality of sorted sub-images awaiting generation, sequentially performing operations comprising (S270):
 - generating the particular sub-image based on description information of the particular sub-image awaiting generation in the plurality of sorted sub-images awaiting generation, a predetermined image generation algorithm, and the static image (S250), wherein generating the particular sub-image comprises, each time a pixel of the particular sub-image is generated, storing the pixel of the particular sub-image in a block storage module;
 - sending out all pixels of the particular sub-image stored in the block storage module;
 - reusing the block storage module to store pixels for a next sub-image from the plurality of sub-images, wherein information about only one sub-image is stored in the block storage module; and
 - preprocessing the particular sub-image, and adding the particular preprocessed sub-image to an image file that satisfies the image format (S260).
2. The method according to claim 1, wherein the description information comprises the number of pixels comprised in a sub-image awaiting generation and location information of each pixel in the sub-image awaiting generation.
3. The method according to claim 1 or 2, wherein generating the particular sub-image based on description information of the particular sub-image awaiting generation, a predetermined image generation algorithm, and the static image comprises:

reading location information of a first pixel in the particular sub-image awaiting generation based on the description information of the particular sub-image awaiting generation;

reading a pixel at a corresponding location in the static image based on the location information; and

determining the first pixel based on the pixel at the corresponding location and the predetermined image generation algorithm, and so on, until each pixel in the particular sub-image awaiting generation is determined, to generate the particular sub-image.

4. The method according to claim 3, wherein the static image comprises a foreground image and/or a background image; and

reading the pixel at the corresponding location in the static image based on the location information, and determining the first pixel based on the pixel at the corresponding location and the predetermined image generation algorithm comprises:

reading a foreground pixel at the corresponding location in the foreground image based on the location information, and using the foreground pixel as the first pixel; or

reading a background pixel at the corresponding location in the background image based on the location information, and using the background pixel as the first pixel; or

reading a foreground pixel at the corresponding location in the foreground image based on the location information, reading a background pixel at the corresponding location in the background image based on the location information, and using the combination of the foreground pixel and the background pixel as the first pixel.

5. The method according to any one of claims 1 to 4, wherein the image generation request further comprises user information; and

generating the particular sub-image based on description information of the particular sub-image awaiting generation, the predetermined image generation algorithm, and the static image comprises:

generating a 2D code information based on the user information, and

generating the particular sub-image based on the description information of the particular sub-image awaiting generation, the predetermined image generation algorithm, the static image, and the 2D code information.

6. The method according to any one of claims 1 to 5, wherein the image format is a JPEG format that defines a plurality of grids and sorting the plurality of sub-images awaiting generation is based on a location of each grid in the plurality of grids.

7. The method according to any one of claims 1 to 6, wherein the image format corresponds to an encoding and compressing method of the image.

8. The method according to any one of claims 1 to 6, wherein preprocessing the particular sub-image comprises adding security check information or integrity check information to the image file.

9. A device for an image generation, the device comprising a plurality of modules configured to perform the method of any one of claims 1 to 8.