

## [CLAIMS]

1. A holographic anti-counterfeiting code verification method comprising:  
acquiring a video stream of a holographic anti-counterfeiting code under different projection angles;

extracting a projection angle and an image feature of the holographic anti-counterfeiting code in each of one or more frames of the video stream;

matching the projection angle and the image feature of the holographic anti-counterfeiting code in each frame in a pre-stored mapping table to obtain a matching ratio of the holographic anti-counterfeiting code in each frame, wherein the mapping table stores mapping relationships between different projection angles and image features of a sample holographic anti-counterfeiting code; and

determining whether or not the holographic anti-counterfeiting code is successfully verified according to the matching ratio of the holographic anti-counterfeiting code in each frame,

the method further comprises:

extracting image features of an anti-counterfeiting label in a plurality of frames of the video stream, wherein the anti-counterfeiting label comprises the holographic anti-counterfeiting code;

comparing an image feature of the anti-counterfeiting label in each of the plurality of frames with an image feature of the sample holographic anti-counterfeiting code stored in the mapping table, to determine a position of the holographic anti-counterfeiting code in each of the plurality of frames on the anti-counterfeiting label; and

determining authenticity of the video stream according to a change in the position of the holographic anti-counterfeiting code in the plurality of frames on the anti-counterfeiting label.

2. The method according to claim 1, further comprising:

acquiring a plurality of sample images of the sample holographic anti-counterfeiting code under different projection angles;

extracting a plurality of sample image features corresponding to the different projection angles from the plurality of sample images; and

constructing the mapping table according to correspondence relationships between the different projection angles and the plurality of sample image features.

3. The method according to claim 1, wherein the determining whether or not the holographic anti-counterfeiting code is successfully verified according to the matching ratio of the holographic anti-counterfeiting code in each frame comprises:

calculating an average matching ratio of the holographic anti-counterfeiting code in the one or more frames; and

comparing the average matching ratio with a preset threshold to determine whether the holographic anti-counterfeiting code is successfully verified.

4. The method according to claim 1, wherein the video stream is obtained by shooting the holographic anti-counterfeiting code by means of transforming shooting angles with preset angle transformation values.

5. The method according to claim 1, wherein authenticity of the video stream is determined according to whether a sudden change occurs in the position of the holographic anti-counterfeiting code in the plurality of frames on the anti-counterfeiting label.

6. A holographic anti-counterfeiting code verification device, comprising:

a first acquiring module configured to acquire a video stream of a holographic anti-counterfeiting code under different projection angles;

a first extracting module configured to extract a projection angle and an image feature of the holographic anti-counterfeiting code in each of one or more frames of the video stream;

a matching module configured to match the projection angle and the image

feature of the holographic anti-counterfeiting code in each frame in a pre-stored mapping table to obtain a matching ratio of the holographic anti-counterfeiting code in each frame, wherein the mapping table stores mapping relationships between different projection angles and image features of a sample holographic anti-counterfeiting code; and

a first determining module configured to determine whether or not the holographic anti-counterfeiting code is successfully verified according to the matching ratio of the holographic anti-counterfeiting code in each frame,

the device further comprises:

a third extracting module configured to extract image features of an anti-counterfeiting label in a plurality of frames of the video stream, wherein the anti-counterfeiting label comprises the holographic anti-counterfeiting code;

a comparing module configured to compare an image feature of the anti-counterfeiting label in each of the plurality of frames with an image feature of the sample holographic anti-counterfeiting code stored in the mapping table, to determine a position of the holographic anti-counterfeiting code in each of the plurality of frames on the anti-counterfeiting label; and

a second determining module configured to determine authenticity of the video stream according to a change in the position of the holographic anti-counterfeiting code in the plurality of frames on the anti-counterfeiting label.

7. The device according to claim 6, further comprising:

a second acquiring module configured to acquire a plurality of sample images of the sample holographic anti-counterfeiting code under different projection angles;

a second extracting module configured to extract a plurality of sample image features corresponding to the different projection angles from the plurality of sample images; and

a constructing module configured to construct the mapping table according to correspondence relationships between the different projection angles and the plurality of sample image features.

8. The device according to claim 6, wherein the first determining module is configured to:

calculate an average matching ratio of the holographic anti-counterfeiting code in the one or more frames; and

compare the average matching ratio with a preset threshold to determine whether the holographic anti-counterfeiting code is successfully verified.

9. The device according to claim 6, wherein the video stream is obtained by shooting the holographic anti-counterfeiting code by means of transforming shooting angles with preset angle transformation values.

10. The device according to claim 6, wherein the second determining module is configured to determine authenticity of the video stream according to whether a sudden change occurs in the position of the holographic anti-counterfeiting code in the plurality of frames on the anti-counterfeiting label.

11. A computer readable storage medium on which a computer program is stored, which, when executed by a processor, causes the processor to:

acquire a video stream of a holographic anti-counterfeiting code under different projection angles;

extract a projection angle and an image feature of the holographic anti-counterfeiting code in each of one or more frames of the video stream;

match the projection angle and the image feature of the holographic anti-counterfeiting code in each frame in a pre-stored mapping table to obtain a matching ratio of the holographic anti-counterfeiting code in each frame, wherein the mapping table stores mapping relationships between different projection angles and image features of a sample holographic anti-counterfeiting code;

determine whether or not the holographic anti-counterfeiting code is successfully

verified according to the matching ratio of the holographic anti-counterfeiting code in each frame,

extracting image features of an anti-counterfeiting label in a plurality of frames of the video stream, wherein the anti-counterfeiting label comprises the holographic anti-counterfeiting code;

comparing an image feature of the anti-counterfeiting label in each of the plurality of frames with an image feature of the sample holographic anti-counterfeiting code stored in the mapping table, to determine a position of the holographic anti-counterfeiting code in each of the plurality of frames on the anti-counterfeiting label; and

determining authenticity of the video stream according to a change in the position of the holographic anti-counterfeiting code in the plurality of frames on the anti-counterfeiting label.