

CLAIMS

1. A data transmission system comprising:
 - a first display device disposed at a first end for displaying an original image generated from raw data;
 - a first capturing device for capturing the original image to generate a first image copy;
 - an image transmitting device communicatively coupled to the first capturing device for transmitting the first image copy;
 - an image receiving device communicatively coupled to the image transmitting device for receiving the first image copy;
 - an image processing device communicatively coupled to the image receiving device for extracting the raw data from the first image copy; and
 - an image controller coupled to the first display device, the image controller being configured to display an original image on the first display device for at least two times, wherein the original image displayed for a first time is at a first position on the first display device, and the original image displayed for a second time is at a second position offset from the first position on the first display device.
2. The data transmission system according to claim 1, wherein the image processing device comprises:
 - a second display device communicatively coupled to the image receiving device for displaying the first image copy;
 - a second capturing device for capturing the first image copy displayed by the second display device to generate a second image copy; and
 - an image conversion device disposed at a second end and communicatively coupled to the second capturing device to extract the raw data from the second image copy.
3. The data transmission system according to claim 1 or 2, wherein the first capturing device is arranged spaced apart from the first display device, and/or the second capturing device is arranged spaced apart from the second display device.

4. The data transmission system according to claim 1 or 2, wherein the first capturing device comprises a distortion-free lens such that the first image copy has no non-linear distortion compared to the original image, and/or the second capturing device includes a distortion-free lens such that the second image copy has no non-linear distortion compared to the original image.
5. The data transmission system of claim 2 wherein the first end is a first closed network and the second end is a second closed network that is communicatively isolated from the first closed network.
6. The data transmission system of claim 5 wherein the first closed network is in a first geographical location and the second closed network is in a second geographical location that is communicatively isolated from the first geographic location.
7. The data transmission system according to claim 1, further comprising an image generating device communicatively coupled to the first display device for generating the original image based on the raw data and transmitting the original image to the first display device.
8. The data transmission system according to claim 7, further comprising a data acquisition device arranged at the first end, wherein the data acquisition device is communicatively coupled to the image generating device to transmit acquired raw data to the image generating device.
9. The data transmission system according to claim 1, wherein the image controller is configured to set coordinate parameters corresponding to at least two display positions that are offset from each other for the same original image, so that the original image is displayed once at each corresponding position on the first display device.
10. The data transmission system according to claim 1, wherein the image controller is configured to generate at least two display copies of the original image, each display copy is set with a coordinate parameter that determines its display position and is

offset from the position of other display copy, so that a display copy of the original image is displayed in sequence on the first display device in accordance with the respective position determined by the respective coordinate parameters.

- 5 11. A data transmission method comprising:
- displaying an original image generated from raw data at a first end;
- capturing the original image to generate a first image copy;
- transmitting the first image copy to a second end; and
- extracting the raw data from the first image copy at the second end,
- 10 wherein displaying the original image generated from the raw data at the first end comprises:
- displaying the original image at the first end for at least two times,
- wherein the original image displayed for a first time is at a first position, and
- the original image displayed for a second time is at a second position offset
- 15 from the first position.
12. The data transmission method according to claim 11, further comprising converting the raw data to the original image at the first end before displaying the original image generated from the raw data at the first end.
- 20 13. The data transmission method according to claim 11, further comprising acquiring the raw data at the first end before converting the raw data to the original image at the first end.
- 25 14. The data transmission method according to claim 11, further comprising encrypting the first image copy before transmitting the first image copy.
15. The data transmission method according to claim 11, wherein extracting the raw data from the first image copy at the second end comprises:
- 30 receiving and displaying the first image copy;
- capturing the first image copy to generate a second image copy; and
- converting the second image copy to the raw data.
- 35 16. The data transmission method according to claim 11, further comprising setting coordinate parameters corresponding to at least two display positions that are offset

from each other for the same original image, so that the original image is displayed once in sequence at each of the at least two display positions.

- 5 17. The data transmission method according to claim 11, further comprising generating a plurality of display copies of the original image, each display copy being set with coordinate parameters that determine its display position and is offset from position of other display copies, so as to display a display copy of the original image at each of the corresponding position determined according to the respective coordinate parameters.
- 10 18. The data transmission method according to claim 11, wherein the first end is a first closed network, and the second end is a second closed network that is communicatively isolated from the first closed network.
- 15 19. The data transmission method according to claim 18, wherein the first closed network is in a first geographical location, and the second closed network is in a second geographical location that is communicatively isolated with the first geographic location.
- 20 20. The data transmission method according to claim 11, wherein transmitting the first image copy to the second end comprises transmitting the first image copy to a display device disposed outside of the second end.
- 25 21. The data transmission method according to claim 11, wherein transmitting the first image copy to the second end comprises transmitting the first image copy to a display device disposed within the second end.
- 30 22. The data transmission method according to claim 11, further comprising:
 capturing the original image displayed at least two times at the first end to generate at least two initial copies of first image, and
 comparing the at least two initial copies of the first image, compensating and/or correcting the initial copy of the first image to obtain a collated copy of first image.
- 35 23. The data transmission method according to claim 17, further comprising:

capturing the displayed plurality of display copies to generate a plurality of initial copies of first image, and

comparing the plurality of initial copies of the first image, compensating and/or correcting the initial copy of the first image to obtain a collated copy of first image.

5