

What is claimed is:

1. A data processing method implemented based on NFC tag, comprising:

an amount data acquisition step to acquire amount data;

a custom order number generation step to generate a custom order number for identifying a transaction, wherein a payment state for the custom order number is set to be an unpaid state when the transaction is not paid, and is set to be a state of successful payment after the transaction is completed;

a tag data application step to issue a tag data application request based on original NFC tag data, the acquired amount data and the custom order number;

a tag data reply step to generate updated NFC tag data based on the tag data application request and save the custom order number, and set the payment state for the custom order number to be the unpaid state;

a tag updating step to update the NFC tag based on the updated NFC tag data and generate an updated NFC tag, wherein the updated NFC tag includes the amount data; and

a tag payment step to read the updated NFC tag, complete payment processing based on the updated NFC tag, and change the payment state for the custom order number to the state of successful payment under the condition that the payment is successful.

2. The data processing method implemented based on NFC tag of claim 1, further comprising after reading the updated NFC tag:

a polling step to judge whether the payment processing based on the updated NFC tag is performed by polling the payment state for the custom order number based on the custom order number.

3. The data processing method implemented based on NFC tag of claim 1, wherein the tag payment step comprises:

reading the updated NFC tag, and composing an access link in a specific format to send a tag payment request, wherein the tag payment request includes the updated NFC tag data;

after carrying out legality verification on the updated tag data, returning a tag payment reply;

calling a payment control to complete the payment based on the tag payment reply;

sending information indicating successful payment, and changing the payment state for the custom order number according to the information indicating successful payment.

4. A data processing method implemented based on NFC tag, comprising:

an amount data acquisition step to acquire amount data;

a custom order number generation step to generate a custom order number for identifying a transaction, wherein a payment state for the custom order number is set to be an unpaid state when the transaction is not paid, and is set to be a state of successful payment after the transaction is completed;

a tag data application step to issue a tag data application request based on original NFC tag data, the acquired amount data and the custom order number;

a tag data reply receiving step to receive a tag data reply based on the tag data application request, wherein for the tag data reply, generate updated NFC tag data based on the tag data application request; and

a tag updating step to update the NFC tag based on the updated NFC tag data to obtain an updated NFC tag for payment processing, wherein the updated NFC tag includes the amount data.

5. The data processing method implemented based on NFC tag of claim 4, further comprising after reading the updated NFC tag:

a polling step to judge whether the payment processing based on the updated NFC tag is performed by polling the payment state for the custom order number.

6. A data processing method implemented based on NFC tag, comprising:

an amount data acquisition step to acquire amount data;

a custom order number generation step to generate a custom order number for identifying a transaction, wherein a payment state for the custom order number is set to be an unpaid state when the transaction is not paid, and is set to be a state of successful payment after the transaction is completed;

a tag updating step to update the NFC tag data based on the amount data and the custom order number to obtain an updated NFC tag, wherein the updated NFC tag comprises the amount data; and

a tag payment step to read the updated NFC tag, complete issuing a payment request based on the updated NFC tag and receive a payment reply, wherein the payment request further includes the custom order number and the payment state for the custom order number, and change the payment state for the custom order number to a state of successful payment under the condition that the payment is successful.

7. The data processing method implemented based on NFC tag of claim 6, further comprising after the tag updating step:

a polling step to judge whether the payment processing based on the updated NFC tag is performed by polling the payment state for the custom order number.

8. The data processing method implemented based on NFC tag of claim 6, wherein the tag payment step comprises:

reading the updated NFC tag and encrypting encrypted data of the updated NFC tag with a private key;

composing an access links in a specific format to issue a tag payment request, wherein the tag payment request includes the updated NFC tag data, the encrypted data, the custom order number, and the payment state of the custom order number;

after decrypting the encrypted data with a public key and carrying out legality verification on the updated tag data in the tag payment request, returning a tag payment reply;

calling a payment control to complete payment based on the tag payment reply;

sending information indicating successful payment, and changing the payment state for the custom order number according to the information indicating successful payment.

9. A data processing method implemented based on NFC tag, comprising:

an amount data acquisition step to acquire amount data;

a custom order number generation step to generate a custom order number for identifying a transaction, a payment state for the custom order number being set to be an unpaid state when the transaction is not paid, and being set to be a state of successful payment after the transaction is completed; and

a tag updating step to update the NFC tag data based on the amount data and the custom order number to generate an updated NFC tag for payment processing, wherein the updated NFC tag includes the amount data.

10. The data processing method implemented based on NFC tag of claim 9, further comprising after the tag updating step:

a polling step to judge whether the payment processing based on the updated NFC tag is performed by polling the payment state for the custom order number.

11. A data processing system implemented based on NFC tag, comprising: an external input device, a tag receiving terminal, a handheld payment terminal and a tag payment system,

the external input device being for inputting amount data and providing the amount data to the tag receiving terminal,

the tag receiving terminal comprising:

an NFC tag module for storing NFC tag data;

an MCU for generating a custom order number for identifying a transaction, wherein a payment state for the custom order number is set to be an unpaid state when the transaction is not paid, on the other hand, for issuing a tag data application request to the tag payment system based on original NFC tag data, amount data provided by the external input device, and the custom order number to acquire updated NFC tag data as described below, and for updating an NFC tag in the NFC tag module based on the updated NFC tag data as described below acquired from the tag payment system to generate an updated NFC tag, wherein the updated NFC tag includes the amount data,

the tag payment system being for generating the updated NFC tag data according to the tag data application request from the tag receiving terminal and saving the custom order number, and for setting the payment state for the custom order number as an unpaid state; and on the other hand, changing the payment state for the custom order number into a state of successful payment when the transaction corresponding to the custom order number is paid successfully,

the handheld payment terminal being for reading the updated NFC tag from the tag receiving terminal and completing payment processing based on the updated NFC tag.

12. The data processing system implemented based on NFC tag of claim 11, wherein the tag receiving terminal further comprises:

a polling module for judging whether the payment processing based on the updated NFC tag is performed by polling the payment state for the custom order number in the tag payment system based on the custom order number.

13. The data processing system implemented based on NFC tag of claim 11, wherein,

the external input device and the tag receiving terminal are disposed separately,

or the external input device is integrated into the tag receiving terminal.

14. A tag receiving terminal, comprising:

an external or built-in input device for inputting amount data;

an NFC tag module for storing NFC tag data; and

an MCU for generating a custom order number for identifying a transaction, wherein a payment state for the custom order number is set to be an unpaid state when the transaction is not paid, and on the other hand, for issuing a tag data application request based on original NFC tag data, amount data provided by the input device, and the custom order number to acquire updated NFC tag data, and for updating an NFC tag in the NFC tag module based on the acquired updated NFC tag data to generate an updated NFC tag, wherein the updated NFC tag includes the amount data.

15. The tag receiving terminal of claim 14, further comprising:

a polling module for judging whether the payment processing based on the updated NFC tag is performed by polling the payment state for the custom order number based on the custom order number.

16. A data processing system implemented based on NFC tag, comprising: an external input device, a tag receiving terminal, a handheld payment terminal and a tag payment system,

the external input device being for inputting amount data and providing the amount data to the tag receiving terminal,

the tag receiving terminal comprising:

an NFC tag module for storing NFC tag data; and

an MCU for generating a custom order number for identifying a transaction, wherein a payment state for the custom order number is set to be an unpaid state when the transaction is not paid, and on the other hand, for updating the amount data and the custom order number into the NFC tag data stored in the NFC tag module to generate an updated NFC tag,

the handheld payment terminal being for reading the updated NFC tag, issuing a payment request to the tag payment system based on the updated NFC tag, and receiving a payment reply from the tag payment system, wherein, the payment request further includes the custom order number and the payment state for the custom order number,

the tag payment system being for receiving the payment request from the handheld payment terminal and returning a payment reply to the handheld payment terminal, and changing the payment state for the custom order number to a state of successful payment when the transaction corresponding to the custom order number is paid successfully.

17. The data processing system implemented based on NFC tag of claim 16, wherein the tag receiving terminal further comprises:

a polling module for judging whether the payment processing based on the updated NFC tag is performed by polling the payment state for the custom order number in the tag payment system.

18. The data processing system implemented based on NFC tag of claim 16, wherein,

the external input device and the tag receiving terminal are disposed separately, or

the external input device is integrated into the tag receiving terminal.

19. A tag receiving terminal, comprising:

an external or built-in input device for inputting amount data;

an NFC tag module for storing NFC tag data; and

an MCU for generating a custom order number for identifying a transaction, wherein a payment state for the custom order number is set to be an unpaid state when the transaction is not paid, and on the other hand, for updating the amount data

obtained by the input device and the custom order number into the NFC tag data stored in the NFC tag module to generate an updated NFC tag.

20. The tag receiving terminal of claim 19, further comprising:

a polling module for judging whether the payment processing based on the updated NFC tag is performed by polling the payment state for the custom order number.

21. A computer readable medium having stored thereon a computer program, wherein,

the computer program, when executed by a processor, implements the data processing method implemented based on NFC tag according to any one of claims 1-10.

22. A computer device comprising a memory, a processor, and a computer program stored on the memory and executable on the processor, wherein, when executing the computer program, the processor implements the data processing method implemented based on NFC tag according to any one of claims 1-10.