METHODS AND SYSTEMS FOR PROCESSING A TRANSACTION AND GENERATING A CONSUMER PATTERN

FIELD OF INVENTION

[0001] The present invention relates broadly, but not exclusively, to methods and systems for processing a transaction and generating a consumer pattern.

BACKGROUND

[0002] A national identification system is a useful tool in the interaction between government agencies and citizens and/or residents of the country. Some national identification systems make use of unique identification numbers to help identify individuals in their activities involving government agencies.

[0003] However, current national identification systems do not naturally provide information to the government about people's behaviour in the relevant sectors, for example, power and utility consumption, environment protection, or spending on sectors conducive to economic growth, or activities threatening law and order, urban planning, etc.

[0004] A need therefore exists to provide methods and/or systems that seek to address the above problem.

SUMMARY

[0005] A first aspect of the present disclosure provides a method for processing a transaction. The method includes receiving, from an acquirer, a payment request message corresponding to a transaction made by a payment card belonging to a consumer. The payment request message includes transaction data and the consumer's national identification data. The transaction data and consumer's national identification data are encrypted. The method also includes splitting, using a splitter module, the payment request message into the transaction data and the consumer's national identification data, and processing the transaction based on

the transaction data. Processing includes approving or declining the transaction. If the transaction is approved, the method further includes providing the transaction data and consumer's national identification data to a database for generating a pattern associated with the consumer.

[0006] A second aspect of the present disclosure provides a method of generating a consumer pattern. The method includes receiving transaction data and associated consumer's national identification data of an approved transaction. The approved transaction is processed according to the method as defined in the first aspect. The method further includes identifying the consumer based on the consumer's national identification data, and generating a pattern associated with the consumer.

[0007] A third aspect of the present disclosure provides a system for processing a transaction. The system includes a processor, and a memory unit communicatively coupled to the processor. The memory unit is configured to store a payment request message received from an acquirer, the payment request message corresponding to a transaction made by a payment card belonging to a consumer and including transaction data and the consumer's national identification data. The transaction data and consumer's national identification data are encrypted. The processor is configured to split the payment request message into the transaction data and the consumer's national identification data, and process the transaction based on the transaction data. Processing includes approving or declining the transaction. If the transaction is approved, the processor is configured to provide the transaction data and consumer's national identification data to a database for generating a pattern associated with the consumer.

[0008] A fourth aspect of the present disclosure provides a system for generating a consumer pattern. The system includes a processor and a memory unit communicatively coupled to the processor. The memory unit is configured to receive transaction data and associated consumer's national identification data of an approved transaction from the system as defined in the thirds aspect. The processor is configured to identify the consumer based on the consumer's national identification data and generate a pattern associated with the consumer.

CLAIMS

1. A method for processing a transaction, the method comprising:

receiving, from an acquirer, a payment request message corresponding to a transaction made by a payment card belonging to a consumer, wherein the payment request message includes transaction data and the consumer's national identification data, and wherein the transaction data and consumer's national identification data are encrypted;

splitting, using a splitter module, the payment request message into the transaction data and the consumer's national identification data;

processing the transaction based on the transaction data, wherein processing comprises approving or declining the transaction; and

if the transaction is approved, providing the transaction data and consumer's national identification data to a database for generating a pattern associated with the consumer.

2. The method as claimed in claim 1, further comprising determining a category of the transaction based on the transaction data, and wherein the transaction data and consumer's national identification data are provided to the database if the transaction belongs to a predetermined category.

3. The method as claimed in claim 2, wherein determining the category of the transaction based on the transaction data comprises identifying selected merchant data from the transaction data.

4. The method as claimed in claim 3, wherein the selected merchant data comprises a merchant category code.

5. The method as claimed in any one of the preceding claims, further comprising a preparatory step of associating the consumer's national identification data with the payment card.

6. A method of generating a consumer pattern, the method comprising:

receiving transaction data and associated consumer's national identification data of an approved transaction, wherein the approved transaction is processed according to the method as claimed in any one of claims 1 to 5;

identifying the consumer based on the consumer's national identification data; and

generating a pattern associated with the consumer.

7. The method as claimed in claim 6, wherein identifying the consumer based on the consumer's national identification data comprises decrypting the consumer's national identification data.

8. The method as claimed in claim 7, wherein generating a pattern associated with the consumer comprises adding the transaction to a list of transactions performed by the consumer.

9. The method as claimed in claim 7, wherein generating a pattern associated with the consumer comprises adding the consumer and the transaction to a group of consumers.

10. The method as claimed in claim 9, wherein the group of consumers is based on geography and/or demography.

11. A system for processing a transaction, the system comprising:

a processor; and

a memory unit communicatively coupled to the processor,

wherein the memory unit is configured to store a payment request message received from an acquirer, the payment request message corresponding to a transaction made by a payment card belonging to a consumer and including transaction data and the consumer's national identification data, and wherein the transaction data and consumer's national identification data are encrypted; and

wherein the processor is configured to:

split the payment request message into the transaction data and the consumer's national identification data;

process the transaction based on the transaction data, wherein processing comprises approving or declining the transaction; and

if the transaction is approved, provide the transaction data and consumer's national identification data to a database for generating a pattern associated with the consumer.

12. The system as claimed in claim 11, wherein the processor is further configured to determine a category of the transaction based on the transaction data, and wherein the transaction data and consumer's national identification data are provided to the database if the transaction belongs to a predetermined category.

13. The system as claimed in claim 12, wherein the processor is further configured to identify selected merchant data from the transaction data to determine the category of the transaction.

14. The system as claimed in claim 13, wherein the selected merchant data comprises a merchant category code.

15. The system as claimed in any one of claims 11 to 14, wherein, in a preparatory mode, the processor is further configured to associate the consumer's national identification data with the payment card.

16. A system for generating a consumer pattern, the system comprising:

a processor; and

a memory unit communicatively coupled to the processor,

wherein the memory unit is configured to receive transaction data and associated consumer's national identification data of an approved transaction from the system as claimed in any one of claims 11 to 15; and

wherein the processor is configured to:

identify the consumer based on the consumer's national identification data; and

generate a pattern associated with the consumer.

17. The system as claimed in claim 16, wherein the processor is further configured to decrypt the consumer's national identification data to identify the consumer.

18. The system as claimed in claim 17, wherein the processor is further configured to add the transaction to a list of transactions performed by the consumer to generate the pattern associated with the consumer.

19. The system as claimed in claim 17, wherein the processor is further configured to add the consumer and the transaction to a group of consumers to generate a pattern associated with the consumer.

20. The system as claimed in claim 19, wherein the group of consumers is based on geography and/or demography.