opportunities (*e.g.*, incentives, card reissuance policies, *etc.*). Doing so may help realize the revenue opportunities, cost benefits, and operational efficiencies associated with receiving up to date insights focused on important cardholders and the current transactions being performed.

The present inventors have recognized that there is a need for methods and/or systems to provide an analytics rules engine to facilitate the processing of payment card transactions.

SUMMARY

According to an aspect, there is provided a computer system, comprising: a payment system authorization platform, including a first communication device to receive authorization messages from an acquirer platform; and a payment system authorization platform computer programmed to: (i) determine that a subset of the received authorization messages meet a pre-determined condition, and (ii) transmit information about the subset of authorization messages to a payment system analytics rules engine, via a communication network, without transmitting the authorization messages not determined to be in the subset to the payment system analytics rules engine; and the payment system analytics rules engine, including: a second communication device to receive the information about the subset of authorization messages via the communication network without receiving the authorization messages not determined to be in the subset; and a payment system analytics rules engine computer programmed to: (iii) automatically assign each of the subset of the authorization messages to a segmentation dimension category associated with payment card presence, (iv) automatically assign each of the subset of the authorization messages to a spending dimension category, and (v) transmit information about the segmentation dimension category and spending dimension category assignments to the payment system authorization platform such that at least some of the subset of authorization messages received by the payment system authorization platform are declined and not forwarded by the analytics engine to an issuer platform based on the segmentation dimension category and the spending dimension category assignments wherein authorization messages approved by the payment system analytics rules engine are forwarded to the issuer platform.

According to a first embodiment of the present disclosure, there is provided a method for providing an analytics rules engine to facilitate the processing of payment card transactions, the method comprising receiving, at a computer processor of a payment system authorization platform, authorization messages from an acquirer platform; determining, by the computer processor of the payment system authorization platform, that authorization requests meet a pre-determined condition; responsive to the determinations, transmitting information about the authorization messages to an analytics rules engine; and receiving, at the processor of the payment system authorization platform, information from the analytics rules engine, including indications that each authorization message is assigned to a segmentation dimension category.

According to a second embodiment of the present disclosure, there is provided a payment system authorization platform comprising a first input to receive authorization messages from an acquirer platform; a determination component to determine that the authorization requests meet a pre-determined condition; responsive to the determination, an output to transmit information about the authorization messages to an analytics rules engine; and a second input to receive information from the analytics rules engine, including indications that each authorization message is assigned to a segmentation dimension category.

According to a third embodiment of the present disclosure, there is provided a non-transitory, computer readable medium having stored therein instructions that, upon execution, cause a computer to perform a method, the method comprising receiving, at a payment system authorization platform, an authorization message from an acquirer platform; determining, by the payment system authorization platform, that the authorization request meets a pre-determined condition; responsive to the determination, transmitting information about the authorization message to an analytics rules engine; and receiving, at the payment system authorization platform, information from the analytics rules engine, including an indication that each authorization message is assigned to a segmentation dimension category.

According to a fourth embodiment of the present disclosure, there is provided method for providing an analytics rules engine to facilitate the processing of payment card transactions, the method comprising receiving, at an analytics rules engine from a payment system authorization platform, information about an

authorization message; analyzing, by the analytics rules engine, the information about the authorization message in accordance with at least one rule to generate a result; automatically assigning the authorization message to a segmentation dimension category; and responsive to the result, transmitting information about the authorization message to the payment system authorization platform, including an indication that the authorization message is assigned to the segmentation dimension category.

According to a fifth embodiment of the present disclosure, there is provided an analytics rules engine, comprising an input to receive, from a payment system authorization platform, information about an authorization message; an analyzer to: (i) analyze the information about the authorization message in accordance with at least one rule to generate a result, and (ii) automatically assign the authorization message to a segmentation dimension category; and responsive to the result, an output to transmit information about the authorization message to the payment system authorization platform, including an indication that the authorization message is assigned to the segmentation dimension category.

According to yet another embodiment of the present disclosure, there is provided a non-transitory, computer readable medium having stored therein instructions that, upon execution, cause a computer to perform a method, the method comprising receiving, at an analytics rules engine from a payment system authorization platform, information about an authorization message; analyzing, by the analytics rules engine, the information about the authorization message in accordance with at least one rule to generate a result; automatically assigning, by the analytics rules engine, the authorization message to a segmentation dimension category; and responsive to the result, transmitting information about the authorization message to the payment system authorization platform, including an indication of the segmentation dimension category.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a typical payment card system.

FIG. 2 is a block diagram view of a system in accordance with some embodiments.

FIG. 3 is a payment system authorization method that may be performed in accordance with some embodiments.

FIG. 4 is an analytics rules engine method that may be performed in accordance with some embodiments.

FIGS. 5, 6A, and 6B illustrate transaction flows according to some embodiments.

FIG. 7 represents an analytics rules engine in accordance with some embodiments.

FIG. 8 is a payment system authorization platform that may be provided in accordance with some embodiments.

FIG. 9 is a payment system authorization database that may be provided in accordance with some embodiments.

FIG. 10 is an analytics rules engine that may be provided in accordance with some embodiments.

FIG. 11 is an analytics rules engine database that may be provided in accordance with some embodiments.

FIG. 12 is a high level block diagram of a decision management profiling system according to some embodiments.

FIG. 13 is a segmentation method that may be performed in accordance with some embodiments.

WHAT IS CLAIMED IS:

1. A computer system, comprising:

a payment system authorization platform, including

a first communication device to receive authorization messages from an acquirer platform; and

a payment system authorization platform computer programmed to:

(i) determine that a subset of the received authorization messages meet a pre-determined condition, and

(ii) transmit information about the subset of authorization messages to a payment system analytics rules engine, via a communication network, without transmitting the authorization messages not determined to be in the subset to the payment system analytics rules engine; and

the payment system analytics rules engine, including:

a second communication device to receive the information about the subset of authorization messages via the communication network without receiving the authorization messages not determined to be in the subset; and

a payment system analytics rules engine computer programmed to:

(iii) automatically assign each of the subset of the authorization messages to a segmentation dimension category associated with payment card presence,

(iv) automatically assign each of the subset of the authorization messages to a spending dimension category, and

(v) transmit information about the segmentation dimension category and spending dimension category assignments to the payment system authorization platform such that at least some of the subset of authorization messages received by the payment system authorization platform are declined and not forwarded by the analytics engine to an issuer platform based on the segmentation dimension category and the spending dimension category assignments wherein authorization messages approved by the payment system analytics rules engine are forwarded to the issuer platform.

2. The system of claim 1, wherein the segmentation dimension category is associated with a high category, a medium category, a low category, and a none category.

3. The system of claim 2, wherein the spending dimension category is associated with: a high category, a medium category, and a low category.

4. The system of claim 3, wherein the payment system analytics rules engine computer is further programmed to calculate, for the subset of the authorization messages in each segmentation dimension category and spending dimension category:

a percent of accounts,

a gross dollar amount,

a decline rate, and

a fraud rate.

5. The system of claim 4, wherein the payment system analytics rules engine computer is further programmed to calculate, for the subset of the authorization messages in each segmentation dimension category and spending dimension category, a trending dimension category.

6. The system of claim 5, wherein the trending dimension category is associated with a higher category, a constant category, and a lower category.

7. The system of claim 1, wherein the segmentation dimension category is further associated with at least one of: (i) cross border transactions, (ii) domestic transactions, (iii) retail shopper transactions, (iv) domestic automated teller machine transactions, (v) cross border automated teller machine transactions, (vi) travel spending transaction, (vii) signature at personal identification number terminal transaction, (viii) automotive fuel dispenser transactions, (ix) online transactions, (x) game transactions, and (xi) gambling transactions.

8. The system of claim 1, wherein said transmitting by the payment system authorization platform comprises forwarding the authorization message to the analytics rules engine via the communication network.

9. The system of claim 8, wherein the analytics rules engine computer processor transmits a supplemented authorization message.

10. The system of claim 9, wherein the supplemented authorization message includes at least one of: (i) a risk flag, (ii) a risk score, (iii) a cardholder category, (iv) a terminal category, (v) enhanced expert monitoring service score data, (vi) a spend ranking field, (vii) a segment ranking field, (viii) a trending indicator, and (ix) qualifying segment identifier.

11. The system of claim 9, further comprising:

forwarding the supplemented authorization message to at least one of: (i) the acquirer platform, and (ii) the issuer platform.

12. The system of claim 1, wherein the analytics rules engine computer processor transmits an authorization approval decision.

13. The system of claim 12, wherein the payment system authorization platform is further programmed to, responsive to receiving the authorization approval decision, transmit to the issuer platform at least one of: the authorization message and a supplemented authorization.