METHOD FOR CUSTOMISING A TRAVEL ITINERARY

FIELD OF INVENTION

[0001] The present invention relates broadly, but not exclusively, to methods for customising travel itineraries.

BACKGROUND

[0002] In the recent times, international tourism has become one of the most thriving markets. In 2010, the number of international tourist arrivals throughout the world reached 948 million. In 2012, they reached 1.04 billion.

[0003] Travel usually involves planning for activities to do during the trip, and the activities include commuting, site seeing, dinning, lodging, shopping, and the like. These travel activities are all related to purpose of the trip and may be described as a schedule or itinerary. A trip is supposed to be a relaxing event. However, statistics indicate that a traveller's planning duration of 100 days average and 60 days median before travel date. Currently, there are websites that allow a user to plan a general travel itinerary. However, such websites do not allow the user to automatically plan a travel itinerary that is based on his past spending behaviour.

[0004] A need therefore exists to provide methods for customising a travel itinerary that seek to address at least some of the above problems; particularly, methods for automatically customising a travel itinerary that is based on a user’s past spending behaviour.

SUMMARY

According to a first aspect of the invention, a computer-implemented method for customising a travel itinerary for an account holder is provided. The method comprises receiving, by a

payment network server, current transaction data when settling a current travel transaction initiated by the account holder

with a current merchant; retrieving, by the payment network server from a database, a plurality of historical transaction data relating to a plurality of historical transactions settled for the account holder prior to the current travel transaction; identifying, by the payment network server, one or more of the plurality of historical transactions that relate to the current transaction data to recognize preferences of the account holder; generating, by the payment network server, at least one merchant relevance score based on the plurality of historical transaction data, and based on time and date data corresponding to a time and date when the account holder may be at a certain venue; customising, by the payment network server, a travel itinerary based on the preferences of the account holder and the at least one merchant relevance score, the travel itinerary including at least one merchant with whom the account holder can initiate a future transaction; and transmitting, by the payment network server to a transaction device of the account holder, a ranked indication of the at least one merchant included in the customized travel itinerary.

In one embodiment, the travel itinerary is further customised based on a relevance score of the at least one merchant, the relevance score indicating the relevance of the at least one merchant for the account holder based on the plurality of historical transactions.

In one embodiment, the method further comprises identifying a plurality of distinct merchants based on the plurality of historical transaction data; and obtaining an industry-type of each of the distinct merchants by referring to a database having stored thereon the industry-type of each of the distinct merchants, wherein the relevance score indicates the relevance of the at least one merchant based on (i) an industry-type of the at least one merchant and (ii) the industry-types of the distinct merchants.

In one embodiment, the method further comprises obtaining a location for each of the distinct merchants by referring to the database further having stored thereon the locations for each of the distinct merchants, wherein the relevance score indicates the relevance of the at least one merchant based on the distance between the obtained locations and a location of the at least one merchant.

In one embodiment, the method further comprises identifying a historical transaction amount for one of the plurality of historical transaction data to determine a transaction budget of the account holder, wherein the relevance score indicates the relevance of the at least one merchant based on the (i) a transaction amount with the at least one merchant and (ii) the transaction budget.

In one embodiment, the method further comprises obtaining a location where goods and/or services will be rendered based on the current transaction data, obtaining a popularity index for each of additional distinct merchants located in the vicinity of the obtained location, the popularity indexes indicating popularity of each of the distinct merchants among other account holders, wherein the travel itinerary is customised further based on the popularity indexes.

In one embodiment, the at least one merchant includes the current merchant.

In one embodiment, the travel itinerary includes at least one further merchant, and the method further comprising ranking the merchants in the travel itinerary based on the corresponding relevance score of the merchant.

In one embodiment, the at least one merchant included in the customised travel itinerary is presented to the user as an augmented reality setting.

In a second aspect of the invention, an apparatus for customising a travel itinerary for an account holder is provided. The apparatus comprises at least one processor; and at least one memory including computer program code; the at least one memory and the computer program code configured to, with at least one processor, cause the apparatus at least to: receive current transaction data when settling a current travel transaction initiated by the account holder with a current merchant; retrieve, from a database, a plurality of historical transaction data relating to a plurality of historical transactions settled for the account holder prior to the current travel transaction; identify at least one of the plurality of historical transactions that relate to the current transaction data to recognize preferences of the account holder; generate at least one merchant relevance score based on the plurality of historical transaction data, and based on time and date data corresponding to a time and date when the account holder may be at a certain value; customise a travel itinerary based on the preferences of the account holder and the at least one merchant relevance score, the travel itinerary including at least one merchant with whom the account holder can

initiate a future transaction; and transmit a ranked indication of the at least one merchant included in the customized travel itinerary to a transaction device of the account holder.

In a third aspect of the invention, a non-transitory computer-readable storage medium having stored thereon computer program code is provided. The non-transitory computer-readable storage medium having stored thereon computer program code which when executed by a computer causes the computer to execute a method comprising: receiving current transaction data when settling a current travel transaction initiated by the account holder with a current merchant; retrieving a plurality of historical transaction data relating to a plurality of historical transactions settled for the account holder prior to the current travel transaction; identifying at least one of the plurality of historical transactions that relate to the current transaction data to recognize preferences of the account holder; generating at least one merchant relevance score based on the plurality of historical transaction data, and based on time and date data corresponding to a time and date when the account holder may be at a certain venue; customising a travel itinerary based on the preferences of the account holder and the at least one merchant relevance score, the travel itinerary including at least one merchant with whom the account holder can initiate a future transaction; and transmitting a ranked indication of the at least one merchant included in the customized travel itinerary to a transaction device of the account holder.

In an aspect of the invention, there is provided a computer-readable storage medium having stored thereon computer program code which when executed by a computer causes the computer to execute a method in accordance with any of the above embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] Embodiments of the invention will be better understood and readily apparent to one of ordinary skill in the art from the following written description, by way of example only, and in conjunction with the drawings, in which:

[0006] Figure 1 shows a block diagram of a transaction system 100 within which transaction data can be received.

[0007] Figure 2 shows a flow chart illustrating a computer-implemented method for customising a travel itinerary according to an example embodiment.

[0008] Figure 3 shows a schematic diagram of a computer system suitable for use in executing the method for customising a travel itinerary.

[0009] Figure 4 shows an exemplary computing device to realize a server for the payment network server 108 shown in Figure 1.

DETAILED DESCRIPTION

[0010] Embodiments of the present invention will be described, by way of example only, with reference to the drawings. Like reference numerals and characters in the drawings refer to like elements or equivalents.

[0011] Some portions of the description which follows are explicitly or implicitly presented in terms of algorithms and functional or symbolic representations of operations on data within a computer memory. These algorithmic descriptions and functional or symbolic representations are

CLAIMS:

1. A computer-implemented method for customising a travel itinerary for an account holder, comprising:

receiving, by a payment network server, current transaction data when settling a current travel transaction initiated by the account holder with a current merchant;

retrieving, by the payment network server from a database, a plurality of historical transaction data relating to a plurality of historical transactions settled for the account holder prior to the current travel transaction;

identifying, by the payment network server, one or more of the plurality of historical transactions that relate to the current transaction data to recognize preferences of the account holder;

generating, by the payment network server, at least one merchant relevance score based on the plurality of historical transaction data, and based on time and date data corresponding to a time and date when the account holder may be at a certain venue;

customising, by the payment network server, a travel itinerary based on the preferences of the account holder and the at least one merchant relevance score, the travel itinerary including at least one merchant with whom the account holder can initiate a future transaction; and

transmitting, by the payment network server to a transaction device of the account holder, a ranked indication of the at least one merchant included in the customized travel itinerary.

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

identifying a plurality of distinct merchants based on the plurality of historical transaction data; and

obtaining an industry-type of each of the distinct merchants by referring to a database having stored thereon the industry-type of each of the distinct merchants,

wherein the relevance score indicates the relevance of the at least one merchant based on (i) an industry-type of the at least one merchant and (ii) the industry-types of the distinct merchants.

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

obtaining a location for each of the distinct merchants by referring to the database further having stored thereon the locations for each of the distinct merchants,

wherein the relevance score indicates the relevance of the at least one merchant based on the distance between the obtained locations and a location of the at least one merchant.

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

identifying a historical transaction amount for one of the plurality of historical transaction data to determine a transaction budget of the account holder,

wherein the relevance score indicates the relevance of the at least one merchant based on the (i) a transaction amount with the at least one merchant and (ii) the transaction budget.

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

obtaining a location where goods and/or services will be rendered based on the current transaction data,

obtaining a popularity index for each of additional distinct merchants located in the vicinity of the obtained location, the popularity indexes indicating popularity of each of the distinct merchants among other account holders,

wherein the travel itinerary is customised further based on the popularity indexes.

6. The method according to claim 1, wherein the at least one merchant includes the current merchant.

7. The method according to claim 1, wherein the travel itinerary includes at least one further merchant, and the method further comprising:

ranking the merchants in the travel itinerary based on the corresponding relevance score of the merchant.

8. The method according to claim 1, wherein the at least one merchant included in the customised travel itinerary is presented to the user as an augmented reality setting.

9. An apparatus for customising a travel itinerary for an account holder, the apparatus comprising:

at least one processor; and

at least one memory including computer program code;

the at least one memory and the computer program code configured to, with at least one processor, cause the apparatus at least to:

receive current transaction data when settling a current travel transaction initiated by the account holder with a current merchant;

retrieve, from a database, a plurality of historical transaction data relating to a plurality of historical transactions settled for the account holder prior to the current travel transaction;

identify at least one of the plurality of historical transactions that relate to the current transaction data to recognize preferences of the account holder;

generate at least one merchant relevance score based on the plurality of historical transaction data, and based on time and date data corresponding to a time and date when the account holder may be at a certain value;

customise a travel itinerary based on the preferences of the account holder and the at least one merchant relevance score, the travel itinerary including at least one merchant with whom the account holder can initiate a future transaction; and

transmit a ranked indication of the at least one merchant included in the customized travel itinerary to a transaction device of the account holder.

10. The apparatus according to claim 9, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

identify a plurality of distinct merchants based on the plurality of historical transaction data; and

obtain an industry-type of each of the distinct merchants by referring to the database having stored thereon the industry-type of each of the distinct merchants,

wherein the relevance score indicates the relevance of the at least one merchant based on (i) an industry-type of the at least one merchant and (ii) the industry-types of the distinct merchants.

11. The apparatus according to claim 10, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

obtain a location for each of the distinct merchants by referring to the database further having stored thereon the locations for each of the distinct merchants,

wherein the relevance score indicates the relevance of the at least one merchant based on the distance between the obtained locations and a location of the at least one merchant.

12. The apparatus according to claim 9, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

identify a historical transaction amount for one of the plurality of historical transaction data to determine a transaction budget of the account holder,

wherein the relevance score indicates relevance of the at least one merchant based on (i) a transaction amount with the at least one merchant and (ii) the transaction budget.

13. The apparatus according to claim 9, wherein the at least one memory and the computer program code is further configured with the at least one processor to:

obtain a location where goods and/or services will be rendered based on the current transaction data,

obtain a popularity index for each of additional distinct merchants located in the vicinity of the obtained location, the popularity indexes indicating popularity of each of the distinct merchants among other account holders,

wherein the travel itinerary is customised further based on the popularity indexes.

14. The apparatus according to claim 9, wherein the at least one merchant includes the current merchant.

15. The apparatus according to claim 9, wherein the travel itinerary includes at least one further merchant, and wherein the at least one memory and the computer program code is further configured with the at least one processor to:

rank the merchants in the travel itinerary based on the corresponding relevance score of the merchant.

16. The apparatus according to claim 9, wherein the at least one memory and the computer program code is further configured with the at least one processor to present, the at least one merchant included in the customised travel itinerary, to the user in an augmented reality setting.

17. A non-transitory computer-readable storage medium having stored thereon computer program code which when executed by a computer causes the computer to execute a method comprising:

receiving current transaction data when settling a current travel transaction initiated by the account holder with a current merchant;

retrieving a plurality of historical transaction data relating to a plurality of historical transactions settled for the account holder prior to the current travel transaction;

identifying at least one of the plurality of historical transactions that relate to the current transaction data to recognize preferences of the account holder;

generating at least one merchant relevance score based on the plurality of historical transaction data, and based on time and date data corresponding to a time and date when the account holder may be at a certain venue;

customising a travel itinerary based on the preferences of the account holder and the at least one merchant relevance score, the travel itinerary including at least one merchant with whom the account holder can initiate a future transaction; and

transmitting a ranked indication of the at least one merchant included in the customized travel itinerary to a transaction device of the account holder.