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Business Location Evaluation for Advertising Partnerships

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ABSTRACT

Businesses benefit from being able to arrive at an accurate valuation for the locations they own/ operate for the purposes of advertising. Such valuation can be based on the amount and composition of the traffic passing through that location. This disclosure describes techniques to construct an index for a business location by using relevant customer, geographical, and shopping data to help businesses arrive at an accurate value for the location for advertising purposes. Businesses can offer advertising at their location and choose from available locations to locate their advertisements. A marketplace for physical advertising can also be established using the described techniques.

KEYWORDS

- Physical advertisement
- Location suitability
- Location evaluation
- Purchase history
- Digital map
- Digital payment
- Clientele affinity
- Advertising location
- B2B commerce

BACKGROUND

Businesses benefit from being able to arrive at an accurate valuation for the locations they own/ operate for the purposes of advertising. Such valuation can be based on the amount

and composition of the traffic passing through that location. While businesses may be able to do this in piecemeal fashion today, an integrated approach that incorporates customer, geographical, and shopping data may not be currently possible.

DESCRIPTION

This disclosure describes an automated technique to construct an index by using relevant customer, geographical, and shopping data to arrive at an accurate valuation of a business location for advertising purposes.
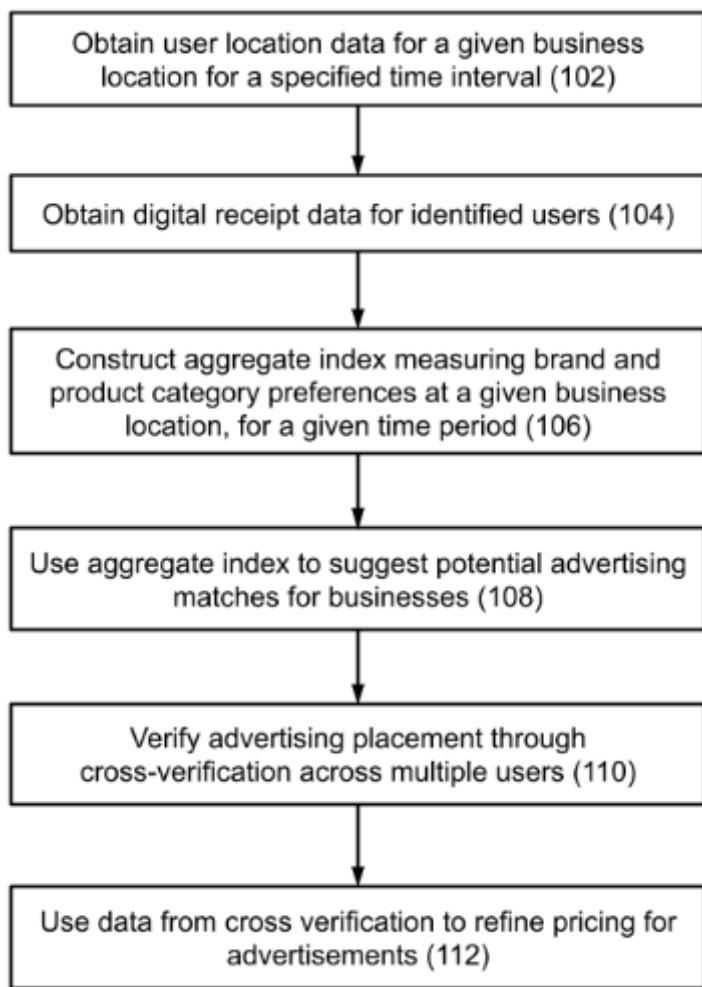

Fig 1: Business location evaluation for advertising partnerships

Fig. 1 illustrates an example of a technique to determine the value of a given business location for the purpose of advertising partnerships. User location data is obtained for a given business location (102) for a specified time interval, e.g., an hour, a day, a week, etc. The data is obtained as an aggregate (e.g., number of people present at the location over the time interval) and only based on permitted location data from users that consent to such use of their presence data.

Further, digital receipt data is also obtained (104). Digital receipt data can include data from a variety of user-permitted sources, such as email history, digital wallets, etc. The time period for the data can be selected based on specific business or product requirements. The data can be analyzed to determine the number of purchases made within a particular category and assigned a weight. For example, the purchase of a low value product (e.g., a single can of soda) may be assigned a low weight, while the purchase of a high value product (e.g., a refrigerator) may be assigned a much higher weight. A measure of person-dollar-time units (for one or more product categories) potentially available at a given location for a particular time period is constructed based on the data.

An aggregate index measuring brand preferences, and product category preferences at a given business location for a given time period (106) is constructed. For example, with user permission, information such as "Between 6pm and 10pm on date D, Person 1 who has spent $A on clothing items of brand X spent m_1 minutes in the hotel lobby H, Person 2 who has spent $B on clothing items of brand X spent m_2 minutes in the hotel lobby H, etc." is obtained. The information is aggregated into records such as "H, X, 6-10pm, value = $(m\_1+m\_2+...+m\_n)*f(M + N + ...)$" for the location (hotel H) to generate an aggregate index value of the preference for X among customers of H between 6pm and 10pm (daily, for weekdays or weekends, separately by

day of week, month, etc.). A single index value for each of the N businesses and M

product/service categories is determined and for up to T recurring time slots during a time period

(e.g., a year) can be stored, thus storing a total of N*M*T values with updates to these tuples

being made as necessary.

The time period can be selected based on business-specific factors. For example, where

available, businesses may benefit from constructing an index over a long period of time, e.g.,

more than a year or two years. In some cases, the time period can be much shorter. For example,

a product may have been recently launched and data may only be available for a much shorter

time duration.

The aggregate index can be used to determine the value of a given business location for

the purposes of advertising a particular brand and/or a particular product category (108). The

advertisement at the location can be a paid advertisement or a barter system can be utilized. For

example, two different businesses that are nearby in the same location can use each other's

locations to advertise their products.

Verification of both the actual placement of the advertisement and its effectiveness can

be done, e.g., by user-based verifications and gamification (110). For example, users at a given

location can be asked if they remember seeing a particular advertisement, with an opportunity to

earn rewards. The verified data can be used to further refine the pricing for advertisements at the
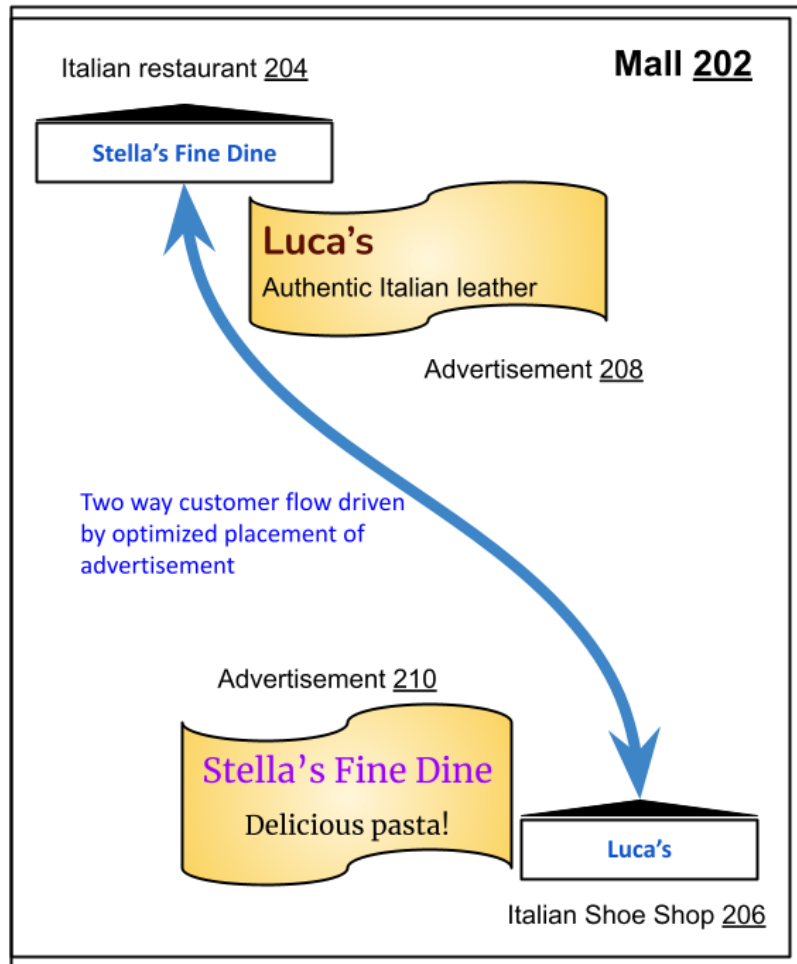
location (112).

Fig 2: Example of advertising barter

Fig. 2 illustrates an example of how two businesses located in the same mall can use the aggregate index to determine if a barter program for advertising makes sense. Two businesses - an Italian restaurant "Stella's Fine Dine" (204) and an Italian shoe shop Luca's (206) - are located in the same mall (202). Via the aggregate index, both businesses determine that a significant percentage of their potential customers also frequent the other business, indicating that there is a strong affinity between the businesses in terms of being valuable to each other's customers. Based on the strong clientele affinity, each business then decides to place advertisements in the other's premises. For example, Luca's may choose to place an

advertisement (208) at Stella's Fine Dine and Stella's Fine Dine may also choose to place an advertisement (210) in Luca's Premises. The index thus enables improved performance from optimized advertisement placement and can result in an increase in two-way customer flow between the two businesses.

The described techniques can be utilized to create a marketplace for physical advertising location by utilizing data on customer traffic, locations, previous purchases, etc. The effectiveness of an advertisement at a location can be determined by measuring the corresponding physical impressions from such data. Purchase data after the advertisement is placed can indicate conversions. A provider of such a marketplace can charge for the advertising partnerships established through the marketplace. The described techniques can also be implemented by any business that has access to consumer location data and purchase history. Such a business can utilize such data to construct an index and to choose physical advertising locations.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs, or features described herein may enable the collection of user information (e.g., information about a user's purchases, a user's email history, a user's preferences, or a user's current location), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level) so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

CONCLUSION

This disclosure describes an automated technique to construct an index by using relevant customer, geographical, and shopping data to help businesses arrive at an accurate value of their location for advertising purposes.