



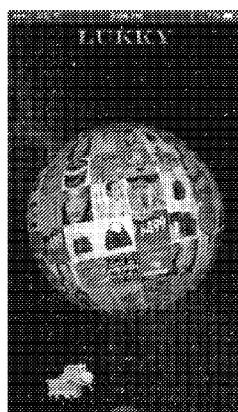
- | | | |
|--|-----------------------------|---|
| (51) International Patent Classification: | | (72) Inventor: PAKTER, Robert L.; 2000 Broadway Street,
Apt. 1208, San Francisco, California 94115 (US). |
| <i>G06Q 30/02</i> (2012.01) | <i>G06F 17/30</i> (2006.01) | (74) Agent: BONE, Richard G.A.; VLP LAW GROUP LLI,
555 Bryant Street, Suite 820, Palo Alto, California 94301 (US). |
| <i>G06Q 30/00</i> (2012.01) | <i>A63F 9/24</i> (2006.01) | |
| (21) International Application Number:
PCT/US2017/045795 | | (81) Designated States (<i>unless otherwise indicated, for every kind of national protection available</i>): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW. |
| (22) International Filing Date:
07 August 2017 (07.08.2017) | | |
| (25) Filing Language: | English | |
| (26) Publication Language: | English | |
| (30) Priority Data:
62/371,765 07 August 2016 (07.08.2016) US | | |
| (71) Applicant: WYNSOM INC. [US/US]; 75 Broadway Street, Suite 202, San Francisco, California 94111 (US). | | |

(54) Title: INDUCING CONSUMER PURCHASES ON MOBILE DEVICES

FIG. 1



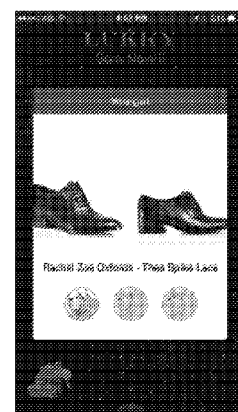
Items you add to your
Wish List get added to
your globe



Spin the globe
any time to start
the game



You have 3 seconds
to tap an item to get
a token



Get 3 tokens
and you're eligible
for the prize

(S7) Abstract: A game, played by consumers on mobile electronic devices, and more particularly relates to a game that facilitates a consumers purchase of a desired product by offering competition-based incentives. The methods induce a non-planned (impulse) purchase using a gaming strategy. Core features of the game are: the successful playing of the game results in the consumer acquiring one or more game tokens that each display an advertisement for an item that the player wishes to buy; b) the advertisement provides the consumer an opportunity to purchase the item, possibly with added inducements to purchase such as discounts or rewards; c) a minimum number of tokens must first be obtained in order for a consumer to be eligible to win the prize, which is the item itself; d) the prize is awarded to the consumer having the fastest response time to answer a multiple choice question distributed to the mobile devices of all eligible players, where the response time is measured as a function of the internal clock of the users mobile device.



(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

INDUCING CONSUMER PURCHASES ON MOBILE DEVICES

CLAIM OF PRIORITY

[0001] This application claims the benefit of priority under 35 U.S.C. § 119(e) to U.S. provisional application serial no. 62/371,765, filed August 7, 2016, which is incorporated herein by reference in its entirety.

TECHNICAL FIELD

[0002] The technology described herein generally relates to a game, played by consumers on mobile electronic devices, and more particularly relates to a game that facilitates a consumer's purchase of a desired product by offering competition-based incentives.

BACKGROUND

[0003] High-speed mobile networks are fast becoming the preferred shopping platform for electronic commerce, all over the World. The portability and high-speed connectivity of these platforms allow for novel methods to trigger impulse-purchasing by consumers. In many developing countries, more than 50% of those surveyed have made recent purchases with a mobile device.

[0004] Electronic commerce platforms typically utilize practices that have been tried and tested in "brick and mortar" retail environments when attempting to drive a sale. Examples include: photographic/image embellishment such that the product for sale may be set in an appealing location or in the presence of attractive models; textual enhancements such as superlatives and other adjectival embellishments to stimulate the shopper's imagination and whet their appetites; provocations and incentives to purchase that utilize behavioral marketing techniques such as reciprocity ("two-for-one"; discount on next purchase, etc.), and scarcity (limited time or inventory linked to short-term deep discounts), or collateral benefits such as bonus points in the consumer's loyalty account redeemable at the retailer,

or an opportunity to receive an additional benefit such as a discount with a co-branded retailer.

[0005] Electronic commerce offers many ways to go beyond the typical types of deal-making and branding that have been the staple of traditional retail outlets. First there is the reach of electronic commerce: it is not tied to a particular physical location yet it can take advantage of real-time location data for millions of consumers when targeting advertisements and offers. Second, there is the timeframe of a given deal: electronic retailers are not limited to daytime store hours, and do not have to broadcast the same timeframe for a given deal to all consumers. Third, there is the ability to micro-target: offers can be tailored to narrow population segments and even individuals themselves. Fourth, consumers have access to complex tools for comparison-shopping in order to make intricate comparisons between large numbers of features of large numbers of products available from dozens of sellers. Combine that functionality with the consumer's newfound ability to review products and services, and to make decisions based on countless reviews by other shoppers, and the consumer can access an unprecedented amount of data. Finally, there is a dynamic nature to the retail process: a retailer can tailor an offer to quickly varying specifics of demand and competitors' pricing, as well as allowing individual consumers to bid on particular deals. There is thus a level of control that can be exerted over the purchasing process that has not been seen before.

[0006] All in all, however, electronic commerce today still operates on a simple utilitarian purchasing model: the consumer reviews options at her pleasure, selects the desired product, and makes a purchase depending on price and availability. Consumers are only lured into the online shopping milieu if they have a need to purchase something, or if an attractive product is brought to the attention of an undisciplined prospective purchaser in an eye-catching manner.

[0007] Furthermore, retailers are continually competing for consumers' attentions against all sorts of other distractions: text messages and e-mails from friends, as well as vendors of other categories of products; social media communications such as tweets from Twitter feeds, and notifications from FaceBook; updates from news organizations and other companies regarding news and products; and online games. Retailers have to face the

daunting reality that potential customers spend three hours (or more) every day on their phones, yet they rarely if ever click on a mobile ad.

[0008] Accordingly, the e-commerce sector would benefit from enhancements to the shopping experience, such as integrating aspects of gaming and competitions into the online buying process, that engage consumers in ways above and beyond the plain fact of making a purchase. The power of online commerce today is that it has advanced to a stage where it can offer much more than traditional retailers ever could. With the type of electronic tools, and the amount of data available to electronic retailers, it is possible to contemplate and accomplish enhancements to a retail transaction that were simply never possible in the shopping models of yesteryear. Even shopping channels on TV could at best offer only very crude tools to retailers and consumers alike.

[0009] The discussion of the background herein is included to explain the context of the technology. This is not to be taken as an admission that any of the material referred to was published, known, or part of the common general knowledge as at the priority date of any of the claims found appended hereto.

[0010] Throughout the description and claims of the instant application the word “comprise” and variations thereof, such as “comprising” and “comprises”, is not intended to exclude other additives, components, integers or steps.

SUMMARY

[0011] The instant disclosure addresses the purchasing of products online. In particular, the disclosure comprises an application program, downloaded to consumers' mobile devices, that permits them to play for and purchase products provided by merchants. The disclosure further comprises a server apparatus for delivering content to the users.

[0012] The disclosure therefore includes a computer apparatus for facilitating a consumer purchase, the apparatus comprising: one or more processing units and computer readable memory configured to execute instructions to: accept a description of one or more items for input into a catalog stored in computer readable memory; disseminate contents of

the catalog over a network connection to a mobile device accessible to a consumer; allow the consumer to identify an item in the catalog; provide the consumer with an array of depictions of items and a manner of selecting a particular depiction of an item; permit the consumer to select a depiction corresponding to the identified item within a specified time frame and, if the consumer is successful, storing a token for the consumer; offering the consumer an opportunity to purchase the item according to one or more incentives; repeating the providing, offering, and permitting until the consumer accumulates a threshold number of tokens; and for an item for which the consumer has accumulated the threshold number of tokens, broadcasting to the consumer a multiple choice question, displayed on their mobile device, and a way to input an answer to the multiple choice question; notifying the consumer that they have won the item if the consumer was quicker to correctly answer the question than all other consumers to whom the question was broadcast, as measured by a comparison of internal clock calculations from the consumers' mobile devices.

[0013] The present disclosure further provides for methods for implementing the game, as described herein, as well as computer readable media encoded with instructions for broadcasting the game to consumers' mobile devices and for managing the game as it is played.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. 1 shows an exemplary interface for a mobile device according to a method as described herein; and

[0015] FIG. 2 shows an exemplary apparatus for performing a process as described herein.

[0016] Like reference symbols in the various drawings indicate like elements.

DETAILED DESCRIPTION

[0017] The instant technology is directed to a game, played by consumers on mobile electronic devices, that facilitates a consumer's purchase of a desired product by offering

competition-based incentives, and that simultaneously improves brand awareness of the product and/or the product's manufacturer. The mobile-based game technology thereby facilitates a type of advertising previously unavailable to both producers and consumers.

Online Game for Facilitating Impulse Purchases

[0018] In overview, the technology herein comprises the following aspects, which include computer-implemented capabilities as well as steps carried out by one or more consumers or the retailer's computer system. The technology herein is implemented as instructions encoded in computer readable memory across one or more computers, and executed on one or more computer processors, in communication with one another and with a population of mobile devices via network protocols. It is to be understood that the term computer processors includes the processors of mobile devices such as phones and tablets. In preferred embodiments, the computer implementation includes an application program (or "app") that runs on a consumer's mobile phone.

[0019] The technology comprises a catalogue of goods and/or services, wherein each item in the catalogue is available to be purchased or to be won by consumers, and is accessible to a population of consumers on one or more mobile devices. The catalog is updated periodically as merchants add new items, and as items are won by consumers playing the game. Every item listed in the catalogue will ultimately be won by a player. To be eligible to win the prize, players must first select an item to add to their one or more wish lists. Because the consumer selects the items that they would like to win (rather than waiting for those items to become available), the consumer is effectively self-targeting the producer's advertising spend and thereby increasing the advertisers' likely return on investment (because the consumer has thus demonstrated at least some measure of "purchasing intent").

[0020] The catalogue can include, and is not limited to, the following categories of items: Travel such as hotel, and hospitality; fashion apparel such as shoes, handbags, jewelry, accessories); dining and delivery; entertainment and events (movies, performances, sports); health, beauty and cosmetic products and services; home goods such as furniture,

art, and electronics; sporting goods; consumer electronics (headphones, stereo players, DVR's, etc.); and automotive (including cars, motor cycles, and scooters).

[0021] The technology comprises a game, accessed and played by a consumer on one or more mobile devices, wherein the consumer must acquire a minimum number, X , of a set of game pieces (also called tokens) in order to be eligible to win a specific prize, such as one of the goods or services in the catalog. In practice, every day, wish list items appear on a simple mobile game and permit the player to acquire game pieces (tokens) for each prize.

[0022] In one embodiment, the player initiates the game by spinning an image of globe on the front screen of the app. An exemplary interface is shown in FIG. 1. Spinning can be accomplished by the player swiping their finger across the image of the globe. In another embodiment, the phone may be shaken to initiate the globe spinning. It is to be understood that the technology is not limited to such a method of initiating the game, and that other ways of permitting a user to start playing by activating the interface can be utilized.

[0023] A new screen then appears showing small images of various items from the player's wish list. In one embodiment, this is displayed on a grid of 18 images, having 3 images (or tiles) in a horizontal direction and 6 images (or tiles) in a vertical direction. In other embodiments there are more tiles, such as 24 tiles, or 30 tiles, arranged in a grid. In other embodiments, the images can be positioned unevenly across the display, and can move around to present an additional challenge to the user. Once the images appear, the player has three seconds to tap on any one and in so doing, the user acquires a token for that item. The game may be made more challenging by shortening the time available to tap on an image, such as by reducing it to 2 seconds, or 2.5 seconds. The next time the user "spins" the globe or otherwise initiates a session of the game, the tiles rearrange relative to the previous view, and the player can either try to find the previous item and try to acquire a second token for it by tapping on it within the time allowed, such as 3 seconds, or the player may choose a different tile and – by successfully tapping on it within 3 seconds – thus be awarded a token for it. The player can initiate the game, such as by spinning the globe, as many times as he/she wants in order to obtain three tokens for every tile that is shown for that day. As the player begins to acquire three tokens for each item, the difficulty of the game increases since the user must recall which items are still without three tokens, yet the

user has only a short period of time, such as three seconds, in order to locate such tiles. It is not necessary for a player to attempt to collect tokens for all of the tiles. A consumer can play the game straightforwardly but winning typically requires skill and memory.

[0024] There is a certain turnover rate for the tiles. Every day, new items from the player's wish-list appear as tiles. Some of these items may have appeared on prior days, but the decision regarding what appears is made by the app, not the player. For example, methods such as machine learning can be used to weight the decision on which tiles appear based on prior browsing, purchasing or sharing data.

[0025] Impulse purchasing has been shown to be increased in chaotic and stressful environments, as the shopper subconsciously attempts to regain control. By showing the player an advertisement for the item as he/she acquires a token for it, impulse purchasing will be facilitated. If the player purchases the product, it does not necessarily get removed from their wish list, meaning that they can still play to win a free instance of the product. Additionally, the appearance of a discount has been shown to increase the rate of impulse purchasing. As such, a discounted price may be shown only as the user acquires tokens, in order to stimulate the sale. The offer may improve as the user acquires the second token and may be even better (e.g., a lower price or fewer points needed to be eligible for that price) with the third token. In this manner, it may become more difficult for the user to resist the temptation for an impulse purchase. Based on the game's design, the consumer sees an advertisement for a particular product again and again during game play, and under conditions where they are self directing their attention to finding the product in the time limited and stressful milieu of a competitive environment.

[0026] Thus, in preferred embodiments, the app doesn't just offer a discount as user acquires tokens, but may also require that the player spends points acquired from playing the game or by making purchases through the app to get the discount. For example, after a first token: "You're eligible for 20% off with 1000 points." After a second token: "You're eligible for 20% off with only 500 points." This allows a merchant to continue to offer the item at full price, and offer markdowns only to certain users. If everyone knew they could get the discount by simply acquiring tokens, they would never buy at full price. The game therefore introduces uncertainty over whether the player will be able to purchase the item at

discount price because they never know how many points might be required to get a discount. Furthermore, the points-enabled discount may be presented at any time, such as with the initial listing, or successively as one acquires the first, second or third tokens, and the nature of the discount (or points required to obtain the discount) may change from listing to token to additional token. (Points can also be awarded for signing up on the app, referring friends, browsing, purchasing, supplying personal information and other activities.)

[0027] The game pieces, or tokens, that a player receives after successfully tapping on a tile, can contain advertisements or promotions for the items in the catalogue. The advertisements may be similar to the product's original listing in the catalogue, or may be represented by, for example, a description of the product or service accompanied by one or more inducements to instantly purchase the item. For example, an inducement can include an added discount, or a benefit of some kind (such as points).

[0028] In this way, the likelihood of awareness and retention of the item, the brand and/or the listing merchant is thereby increased compared to a conventional advertisement served to a user, and under conditions that it is perceived as a barrier to the additional content the user seeks (whether it is a pop-up advertisement in a web-browser, or a pre-roll video on mobile).

[0029] The technology utilizes transmission of data from each player of the game, over high speed computer and mobile networks, for example to a server or collection of servers.

[0030] The technology still further utilizes computer implemented tools that analyze real-time data on consumer behavior and determine when a specific prize will be awarded. The tools factor in how many clicks on a catalogue item the merchant or advertiser has paid for. The click fee can be charged according to a number of options: for example, when a consumer taps on an item in the catalogue to read more about it; alternatively, the click fee may be charged when a player adds the item to his/her wish-list. In alternative embodiments, a click fee may be charged when the player taps the tile and gets a token or doesn't get a token. In alternative embodiments, a click fee may be charged when the player clicks through an ad from the token and makes or doesn't make a purchase. The merchant determines the advertising budget, and this is divided by the cost per click to

determine the actual number of clicks to be allowed for a given item. Once this budget is exhausted, the prize is ready to be awarded and the listing disappears from players' phones.

[0031] The technology still further includes a method to pick a winner of the prize: In one embodiment, this can involve disseminating one or more multiple choice questions to the mobile devices of consumers who have collected the minimum number, X , of tokens to be eligible to win the item. In preferred embodiments, X is 3, but for highly prized products such as cars, X can be increased to higher numbers such as 5 or 7. The answer to the question may be found on the merchant's own website (or app). Each catalogue listing and token has a link to the merchant's website or app so click-through rates are measurable. All users with three tokens for a given item receive a notification of the prize-winning question at the same time. The user who has fastest response time with the correct answer wins. A determination of the consumer with the fastest correct response time to the multiple choice question based on the data recorded by the internal clock of smartphones, and automatically uploaded over high speed mobile networks to the app server, wherein the computer application compares the data of all players and determines the winner. This approach relies on technology inherent in mobile devices in order to determine the winner: once the user receives an alert to answer a prize winning question (PWQ), the phone's internal clock is used to measure the time it took from when the consumer actually opens the question to the time they send their response.

[0032] In addition, the technology takes advantage of high speed mobile networks to collect everyone's answer and rely on the server to decide who answered the fastest based on their own phone's data. This is not influenced by whose answer came in first. Everyone gets a limited amount of time, say five minutes, to answer from the time the question is issued. Thus, everyone who is eligible (has the determined number of, say three, tokens) gets the alert at the same time and everyone has 5 minutes to respond from the issuance of the PWQ. Once the user opens the PWQ, their unique time clock starts (as recorded by their phone's clock) and the timer ends once they submit their answer, as long as that is before the expiry of 5 minutes from the issuance of the PWQ. The format also guarantees that there will always be a winner, subject – of course to the resolution of the mobile

device's clock. Thus, the chance that two persons will have the same time to within a millisecond, is very small indeed.

[0033] In an alternative embodiment, a user collects two tokens for a given item and awaits the appearance of the third token. Unlike with the first embodiment, the third token is withheld until the producer's advertising budget is reached. At that point, the "3rd Token" tile will appear on the games of all active users who have already have collected two tokens for that item. The first user to tap the "3rd Token" tile and correctly answer the presented PWQ wins the item. The clock in the users' phones are also utilized to determine which user is the winner in apparently simultaneous responses (the fastest response wins).

[0034] Once a winner is determined, the manager of the game (which may be a person, or which may be determined by aspects of the computer system that monitors the game), notifies all players of the game of the winner's time, and each individual player of their own time to answer the question. The app may also display an image of the winner. The item and all related data is then scrubbed from all users' phones (not just those playing the game).

[0035] The system can also accomplish distribution of limited personal information of the winner (such as consumer's first name, photograph, city of residence) over mobile networks to all eligible players so that they know that the game has been won. For example, in a preferred embodiment, the app notifies other players by displaying on other player's devices the winner's photo or other authorized likeness, his/her winning time, and the player's own time (assuming they answered correctly). In this manner, the game is totally transparent to participating users. In traditional competitions, only the winner knows – in real time that they have won the prize. Other players may know that someone has won but do not normally have a way of gauging their own performance relative to that person.

[0036] The system can ensure removal of an item that has just been won from all consumers' mobile phones, and replace it with a fresh item selected by the system as most likely to be purchased by a given consumer, based on analysis of prior browsing, purchasing and game playing behavior, or other demographic information of that consumer. Thus the system may utilize one or more methods known as predictive analytics in order to

identify likely purchasers of any given product, as well as products that are likely to be of interest to a given player. This information may be built up over time by the app and transmitted to the server, to be stored in a database of information on players of the game. Alternatively, it may be collected, gathered, or purchased from third party suppliers of such data.

[0037] In preferred embodiments, specific behavioral marketing principles can be integrated into the method in such a way as to promote impulse purchasing. Examples of these are the following, and it would be understood that other methods not listed here could be applied.

[0038] Reciprocity: By engaging with the app, the player is rewarded with points (that can be used for discounts) and with the ability to win a prize the user chooses. As such, the user may be more likely to purchase an item on this app compared to another. This principle of reciprocity marketing is widely employed in markets that offer free samples (no matter how many boxes of free samples they give away, at the end of the day, they will sell more product due to the campaign). This principle has been demonstrated to be highly effective by many of the “big box” retailers.

[0039] Repetition: the user sees the same ad for the item repeatedly as he/she tries to acquire the requisite tokens for prize eligibility: Repetition of offers is often used to promote impulse purchasing. At some point the consumer succumbs and just buys the product.

[0040] Stress and chaos: the consumer can be put in a stressful environment as the clock ticks down during the search for either a specific tile or any tile without three tokens. Stress is thought to promote impulse purchasing; in this situation the player may just buy the product anyway if they believe that they will be out of luck and not win the item in the game.

[0041] Discount: as the user acquires tokens, a discount may appear for an item given that the user has enough points to enable the discount (points are given out for signing up, referring contacts, playing the game and purchasing, among other actions). Discounts are well-understood to promote impulse purchasing.

[0042] Scarcity: offers of items for sale are limited to the number of units on hand for sale. This is shown with the item listing (such as “only 3 left” or “only 2 left at this price”. Scarcity has been shown to promote impulse purchasing as has been successfully employed on televised home shopping networks which routinely employ limits on the number of items available as well as time limitations on the availability of items. For example, such a network might broadcast: “only three left to purchase”, or “only five minutes left before the offer closes”.

[0043] All of these principles can be employed on the platform to induce impulse purchasing behavior and thus increase the “conversion rate,” which is defined by the number of unit sales of the product divided by the number of clicks on the product.

[0044] Furthermore, since it is only web enabled mobile devices that can be deployed to play the game (inventory and game mechanics are updated in real time based on user participation), the mobile device technology provides a unique opportunity to expand advertising into alternative approaches.

Computational Implementation

[0045] The computer functions for implementing an online game within consumers' mobile devices, measuring response times, managing user interface capabilities, and presenting consumer products, as well as the server functions needed to manage operation of the game, can be developed by a programmer or a team of programmers skilled in the art. The functions can be implemented in a number and variety of programming languages, including, in some cases mixed implementations. For example, the functions as well as scripting functions can be programmed in Prolog, Pascal, C, C++, Java, Python, VisualBasic, Perl, .Net languages such as C#, and other equivalent languages not listed herein. The capability of the technology is not limited by or dependent on the underlying programming language used for implementation or control of access to the basic functions. Alternatively, the functionality could be implemented from higher level functions such as tool-kits that rely on previously developed functions for manipulating consumer product catalog data.

[0046] The technology herein can be developed to run with any of the well-known computer operating systems in use today, as well as others not listed herein. Those operating systems include, but are not limited to: Windows (including variants such as Windows XP, Windows95, Windows2000, Windows Vista, Windows 7, and Windows 8, Windows Mobile, and Windows 10, and intermediate updates thereof, available from Microsoft Corporation); Android OS, such as any version in the range Android 1.6 – 6.0, whether referenced by a number or an epithet such as “donut”, “éclair”, or “froyo”; Apple iOS (including variants such as iOS3, iOS4, and iOS5, iOS6, iOS7, iOS8, iOS9, and iOS10, and intervening updates to the same); Apple Mac operating systems such as OS9, OS 10.x (including variants known as “Leopard”, “Snow Leopard”, “Mountain Lion”, and “Lion”; the UNIX operating system (e.g., Berkeley Standard version); and the Linux operating system (e.g., available from numerous distributors of free or “open source” software).

[0047] To the extent that a given implementation relies on other software components, already implemented, such as functions for managing user interface operations, functions for receiving and transmitting data over a wireless network, and functions for monitoring the internal clock of a device, those functions can be assumed to be accessible to a programmer of skill in the art.

[0048] Furthermore, it is to be understood that the executable instructions that cause a suitably-programmed computer to execute the methods described herein, can be stored and delivered in any suitable computer-readable format. This can include, but is not limited to, a portable readable drive, such as a large capacity “hard-drive”, or a “pen-drive”, such as connects to a computer’s USB port, an internal drive to a computer, and a CD-Rom or an optical disk. It is further to be understood that while the executable instructions can be stored on a portable computer-readable medium and delivered in such tangible form to a purchaser or user, the executable instructions can also be downloaded from a remote location to the user’s computer or mobile device, such as via an Internet connection which itself may rely in part on a wireless technology such as WiFi. Such an aspect of the technology does not imply that the executable instructions take the form of a signal or other non-tangible embodiment. The executable instructions may also be executed as part of a “virtual machine” implementation.

[0049] The technology herein may be run as a stand alone app, or via web-browser, and in the latter instance is not limited to a particular web browser version or type; it can be envisaged that the technology can be practiced with one or more of: Safari, Internet Explorer, Edge, FireFox, Chrome, or Opera, and any version thereof.

Computing apparatus

[0050] An exemplary general-purpose computing apparatus 900 suitable for practicing the methods described herein is depicted schematically in FIG. 2. Such an apparatus typically functions as a server and can communicate with the mobile devices of many, potentially millions of, consumers.

[0051] The computer system 900 comprises at least one data processing unit (CPU) 922, a memory 938, which will typically include both high speed random access memory as well as non-volatile memory (such as one or more magnetic disk drives), a user interface 924, one more disks 934, and at least one network or other communication interface connection 936 for communicating with other computers over a network, including the Internet, as well as other devices, such as via a high speed networking cable, or a wireless connection. There may optionally be a firewall 952 between the computer and the Internet. At least the CPU 922, memory 938, user interface 924, disk 934 and network interface 936, communicate with one another via at least one communication bus 933.

[0052] CPU 922 may optionally include a suitably configured processor, optimized for manipulating large amounts of data.

[0053] Memory 938 stores procedures and data, typically including some or all of: an operating system 940 for providing basic system services; one or more application programs, such as a parser routine 950, and a compiler (not shown in FIG. 2), a file system 942, one or more databases 944 that store product inventory 946, prize winning questions 948, and other information, and optionally a floating point coprocessor where necessary for carrying out high level mathematical operations. The methods of the present invention may also draw upon functions contained in one or more dynamically linked libraries, not shown in FIG. 2, but stored either in memory 938, or on disk 934.

[0054] The database and other routines shown in FIG. 2 as stored in memory 938 may instead, optionally, be stored on disk 934 where the amount of data in the database is too great to be efficiently stored in memory 938. The database may also instead, or in part, be stored on one or more remote computers that communicate with computer system 900 through network interface 936.

[0055] Memory 938 is encoded with instructions for receiving input from one or more merchants and for calculating a similarity score for consumers against one another. Instructions further include programmed instructions for performing one or more of parsing, calculating a fastest time from a database of times, and various statistical analyses. In some embodiments, calculations such as the type of product a player will most like to see are not calculated on the computer 900 but are performed on a different computer and, e.g., transferred via network interface 936 to computer 900.

[0056] Various implementations of the technology herein can be contemplated, particularly as performed on computing apparatuses of varying complexity, including, without limitation, workstations, PC's, laptops, notebooks, tablets, netbooks, and other mobile computing devices, including cell-phones, mobile phones, wearable devices such as smart watches and fitness trackers, personal digital assistants, and domestic appliances. The computing devices can have suitably configured processors, including, without limitation, graphics processors, vector processors, and math coprocessors, for running software that carries out the methods herein. In addition, certain computing functions are typically distributed across more than one computer so that, for example, one computer accepts input and instructions, and a second or additional computers receives the instructions via a network connection and carry out the processing at a remote location, and optionally communicate results or output back to the first computer.

[0057] Control of the computing apparatuses can be via a user interface 924, which may comprise a display, mouse 926, keyboard 930, and/or other items not shown in FIG. 2, such as a track-pad, track-ball, touch-screen, stylus, speech-recognition, gesture-recognition technology, or other input such as based on a user's eye-movement, or any subcombination or combination of inputs thereof. Additionally, implementations are configured that permit a purchaser of advertising inventory to access computer 900 remotely, over a network

connection, and to view inventory via an interface having attributes comparable to interface 924.

[0058] In one embodiment, the computing apparatus can be configured to restrict user access, such as by scanning a QR-code, gesture recognition, biometric data input, or password input.

[0059] The manner of operation of the technology, when reduced to an embodiment as one or more software modules, functions, or subroutines, can be in a batch-mode – as on a stored database of inventory and consumer data, processed in batches, or by interaction with a user who inputs specific instructions for a single advertising campaign.

[0060] The results of matching advertising inventory to criteria for an advertising campaign, as created by the technology herein, can be displayed in tangible form, such as on one or more computer displays, such as a monitor, laptop display, or the screen of a tablet, notebook, netbook, or cellular phone. The results can further be printed to paper form, stored as electronic files in a format for saving on a computer-readable medium or for transferring or sharing between computers, or projected onto a screen of an auditorium such as during a presentation.

[0061] Accordingly, the methods herein may be implemented on or across one or more computing apparatuses having processors configured to execute the methods, and encoded as executable instructions in computer readable media.

Cloud Computing

[0062] The methods herein can be implemented to run in the “cloud.” Thus the processes that one or more computer processors execute to carry out the computer-based methods herein do not need to be carried out by a single computing machine or apparatus. Processes and calculations can be distributed amongst multiple processors in one or more datacenters that are physically situated in different locations from one another. Data is exchanged with the various processors using network connections such as the Internet. Preferably, security protocols such as encryption are utilized to minimize the possibility that consumer data can be compromised.

EXAMPLES

Example 1: Exemplary Game

[0063] In one embodiment, the game consists of a display of tiles, each representing an item the consumer has chosen from the mobile catalogue. The tiles can be rectangular, or square, or even circular or oval. In preferred embodiments, the tiles can be laid out in a grid, where in other embodiments the tiles can be round and laid out randomly, like bubbles floating through the air, and in non-overlapping configurations. In preferred embodiments the tiles are non-overlapping, whereas in embodiments that are more challenging for a user, the tiles can overlap partially with one another, and can also have different sizes. When a tile is tapped on the mobile phone screen (clicked), a corresponding advertisement for the product is presented to the consumer, which may be similar to the advertisement the consumer saw in the catalogue.

[0064] One feature of this embodiment of the mobile game is the display of tiles on a representation of a globe, such that computer-encoded instructions in the application project a 2 dimensional photographic image of a product onto depiction of a 3 dimensional surface (such as a globe). This projection can, in turn, be manipulated with the consumer's finger on the screen of the mobile device so that it appears to rotate in three dimensions in order to display multiple items available to be competed for at that point in time.

[0065] Additionally, the globe can serve as a way to initiate the game, such as by being swiped with enough force or speed to cause the globe to spin adequately. During this spin time, the application contacts the server to update relevant information.

[0066] Once the game is initiated, tiles on the globe migrate to a flat arrangement on the consumer's mobile phone screen. These have been automatically rearranged in a random fashion relative to the last appearance so that a consumer cannot simply remember the last position and gain an easy token. The consumer must choose to tap a specific tile within a certain number of seconds in order to acquire a token for the item displayed in the tile.

[0067] Ultimately, the consumer would like to acquire a requisite number of tokens, X , for at least one of, and preferably all of, the items in the game, since this provides eligibility to receive the prize winning multiple-choice question.

[0068] Once the merchant's click budget is exhausted (i.e., the merchant typically pays per consumer-click and therefore has anticipated a certain level of response commensurate with an advertising budget for the item), the prize winning question goes out only to users who have collected the requisite number, such as three, tokens for that item. Or, as in an alternative embodiment described elsewhere herein, at this point a third tile is broadcast only to those users who have successfully obtained two token tiles, and then the first user to tap the third tile and correctly answer the PWQ is the winner. Since a user has no idea when the item's click budget is going to be reached (and hence the timing of the issuance of the PWQ, or third token tile), the players are incentivized to play the game early in the day thus ensuring eligibility for as many of the items in the grid as possible. The multiple choice question may relate to information the merchant would like the customer to know, or research concerning the product or the brand. The answer to the question may be revealed on the merchant's website or their own mobile app, such that the game serves to facilitate consumer awareness about the brand and its products, and thereby promotes purchasing. Thus a successful player may tactically choose to familiarize themselves with aspects of the product and the merchant before receiving the question, in order to improve the speed at which they answer it.

[0069] The game tiles displayed daily may change so it behooves the consumers to play the game every day in order to ensure that the required number of tokens, say X , are acquired for every item. In some embodiments of the game, the value of X can vary from day to day.

[0070] A prize winning question regarding an item may appear on a consumer's mobile device even if the game tile for that product is not displayed on the consumer's phone that day (as long as the consumer has already acquired the minimum number of tokens, X , to be eligible for the prize). This is because the players do not know when the PWQ will be issued since none of them knows how many clicks are left in the merchant's budget. For example, for a high value item, like a car, a consumer might have played for it and acquired

their three tokens a month ago or more prior. Since the merchant's click budget was high, lots of users had the opportunity to become eligible and it took several weeks for the number of paid for clicks to be exhausted. Alternatively, a product may have just appeared as one of a player's tiles today, even though she had added it to her wish-list a month ago. (Such a delay may be due to random distribution, or the fact that the predictive analytics that made sure the user received tiles that were most likely to result in a purchase – the player was unlikely to buy a car but more likely to buy lipstick on impulse, for example). Yet, the day the product appears on the player's tiles, she collects her three tiles, and coincidentally on that same day the click budget is reached and the PWQ goes out to her and the other eligible users. This experienced unpredictability of the game makes it more addictive for users.

[0071] Other embodiments of the game are envisaged (for example, the display of tiles in a horizontal scrolling fashion, whereby the player must “attack” individual tiles as they appear within a given time frame), consistent with the common features of each game being: a) the successful playing of the game results in the consumer acquiring a game token that displays an advertisement for the item; b) the advertisement provides the consumer an opportunity to purchase the item, possibly with added inducements to purchase such as discounts or rewards; c) a minimum number of tokens, X , must first be obtained in order for a consumer to be eligible to win the prize; d) the prize is awarded to the consumer with the fastest response time to answer a multiple choice question distributed to the mobile devices of all eligible players.

Example 2: Exemplary methods used by retailer

[0072] A retailer can list a given item in the catalog for free. The listing can include images and a full description of the item, a link to the seller's website or store and a “Buy-Now” tab. In some embodiments, this is provided at no cost to the retailer.

[0073] The retailer may pay an affiliate commission to the provider of the game service. This can be structured as a cost per click (when a user adds a retailer's item to her wish list), *i.e.*, they intend to win the item. The retailer can set a click-budget that the game provider won't exceed.

[0074] The organizer of the game can purchase one instance of every item listed in the catalog and ultimately award it to a consumer who plays the game. The game organizer may, then, preferably want “hot” selling items from retailers.

[0075] The most highly sought-after prizes of the week can be given away on a dedicated online shopping network that may feature attractions such as music, product reviews, and overviews of merchants. The show may also feature live or recorded segments at the location of the merchant.

[0076] Merchants can offer various incentives via the game: For example, a retailer can offer a special price to the user most likely to buy it on impulse. That person can be identified as the one who added the product to her wish list and has already started collecting tokens for it. That level of response indicates that she’s committed to the retailer in question.

[0077] Even by offering the special price to this consumer, the retailer won’t cheapen its brand with deep discounts across the board and can keep selling the product to other consumers at the full price.

[0078] It is also possible to implement a prize :”elasticity” based on certain user criteria For example, upon acquiring a token for a given item, a user may be offered a time limited discount price for that item, in exchange for a certain number of loyalty points (acquired on the platform as rewards for various user directed activities including but not limited to: game play, browsing, sharing personal data pertaining to consumer preferences such as brands, music, film preferences, and for referring friends). Utilizing the mobile devices’ internal clocks, the remaining time on the offer can be demonstrated after which the user may still purchase at the listed price. Based on real time data such as sales velocity (how fast product is moving), remaining inventory, and minimal total sales revenue the merchant is willing to accept, the mobile device may be programmed to offer fewer or more points needed to effectuate the sales price, and control other parameters such as the duration of each discount opportunity (typically displayed in seconds in order to induce impulse purchasing). Although desktop computers can offer price elasticity using similar features, the setting of a mobile game where the user’s game activity may influence the likelihood or

specifics of the discount offered is key to the technology described herein. This is because the user's game activity represents in essence, participation in an advertising and shopping milieu such that user proclivities and behavior are recorded in real time. Predictive tools may then present the offer to which the user is most likely to respond (conversion), thereby increasing the advertiser's return on their advertising budget.

Example 3: Integrated Shopping Network

[0079] In some variants, consumers may periodically view a live video feed on their mobile devices that can be used to promote products in the catalog and generally have entertainment value for the consumer.

[0080] Upcoming prizes to be awarded are announced on an app, or via a live video feed, before the question is distributed to consumers' phones thus providing an advantage to players who watch the live-streamed show. Players can then make sure they have the three tokens needed to be eligible for those specific prizes and have researched the app or website of the merchant for answers to the possible questions.

Example 4: Maintaining Player interest

[0081] In some embodiments, there are several strategies implemented to maintain active user participation. The number of Daily Active Users (DAUs) is a measure used to quantify success of methods that induce users to play every single day and not tire of the game.

[0082] First, by allocating a significant proportion of revenue for prizes (e.g., at least 40%), it is possible to ensure that all players win at least something, regularly. The winnings may include relatively low value prizes such as discount coupons for retail stores, vouchers for meals at restaurants, and tickets for upcoming events including movies, concerts and sports. Many of these prizes will be offered by merchant clients that wish to use the game for promotion.

[0083] Second, players' participation via mobile devices are constantly rewarded with points. Points can be acquired for activities such as providing personal preferences;

referring contacts to the app; browsing and purchasing. The points can then be used to obtain discounts on items available through the app. The points are thus most valuable to users who actually make purchases on the app.

[0084] From the point of view of a merchant who pays according to a cost-per-click (CPC) metric, this is advantageous: a CPC is more valuable for a consumer that purchases than one who doesn't. The points system keeps the most valuable consumer engaged (the ones most likely to convert to a purchase) but doesn't incentivize those who don't make purchases.

[0085] Third, the game is designed to be fun, entertaining and rewarding. Each day, the consumer can browse and add any item to their wish-list. However, each day the tiles on the user's game may be different from those seen the day before. Therefore the user is incentivized to play the game every day to ensure he/she has acquired the required number of tokens for every item listed in their wish-list (and is thus eligible to receive the prize winning question).

[0086] Furthermore, by introducing variations of the game and new games over time, it is possible to keep the app fresh and interesting.

[0087] Fourth, the game organizers may rely on influencers to promote the app, not only for new downloads but to promote items from the catalogue, particularly during online network appearances.

Example 5: Benefits to Merchants

[0088] Conventional advertising is a blunt instrument for brands. Payments for ad time are proportional to the number of predicted viewers on a platform. To improve return on investment (ROI), advertising agencies attempt to stratify viewers based on demographics and individual interests. Unfortunately, brands still pay for viewers who may have no interest or inclination for the product.

[0089] Mobile devices represent a particularly challenging medium for advertising. Due to the small screen, ads are intrusive and annoying, and this has led to a proliferation of ad-blocking software. Even with targeting of advertising content, conversion rates are poor.

[0090] Additionally, “fat thumb” (inadvertent) clicks on ads are a huge problem that inevitably cause brands to pay for clicks that are accidental and low yield.

[0091] Finally, “click fraud”, whereby brands are charged for “phantom” bot generated clicks, remains a challenge.

[0092] In a preferred embodiment of the game herein, advertisements are pulled, rather than pushed. Consumers browse the catalogue and select the items that they are interested in. Once a consumer chooses an item to try to win, that user has self-targeted as an individual who may be susceptible to an impulse purchase. The methods herein capitalize on this phenomenon, by incorporating discounts and established behavioral marketing principles including reciprocity, repetition and scarcity, into a game format. Thus, issues of inadvertent clicks and misdirection of ad content to uninterested recipients is reduced considerably.

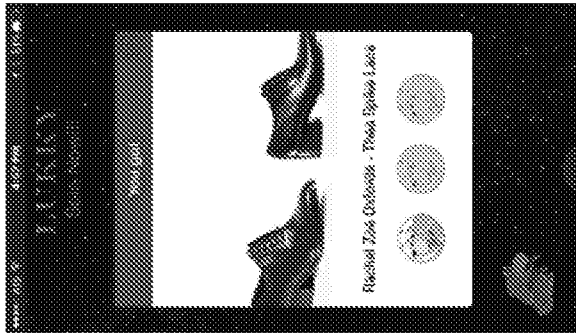
[0093] All references cited herein are incorporated by reference in their entireties.

[0094] The foregoing description is intended to illustrate various aspects of the instant technology. It is not intended that the examples presented herein limit the scope of the appended claims. The invention now being fully described, it will be apparent to one of ordinary skill in the art that many changes and modifications can be made thereto without departing from the spirit or scope of the appended claims.

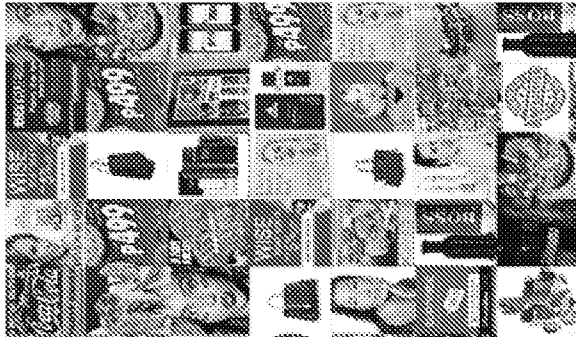
WHAT IS CLAIMED:

1. A computer apparatus for facilitating a consumer purchase, the apparatus comprising:
 - one or more processing units and computer readable memory configured to execute instructions to:
 - accept a description of one or more items for input into a catalog stored in computer readable memory;
 - disseminate contents of the catalog over a network connection to a mobile device accessible to a consumer;
 - allow the consumer to identify an item in the catalog;
 - provide the consumer with an array of depictions of items and a manner of selecting a particular depiction of an item;
 - permit the consumer to select a depiction corresponding to the identified item within a specified time frame and, if the consumer is successful, storing a token for the consumer;
 - offering the consumer an opportunity to purchase the item according to one or more incentives;
 - repeating the providing, offering, and permitting until the consumer accumulates a threshold number of tokens; and
 - for an item for which the consumer has accumulated the threshold number of tokens, broadcasting to the consumer a multiple choice question, displayed on their mobile device, and a way to input an answer to the multiple choice question;
 - notifying the consumer that they have won the item, if the consumer was quicker to correctly answer the question than all other consumers to whom the question was broadcast, as measured by a comparison of internal clock calculations from the consumers' mobile devices.

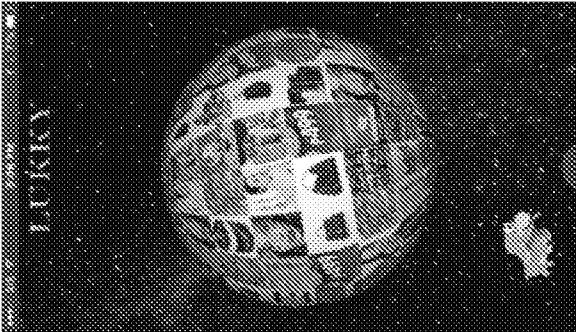
FIG. 1



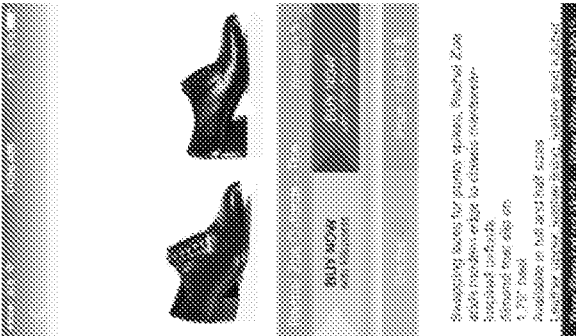
Get 3 tokens
and you're eligible
for the prize



You have 3 seconds
to tap an item to get
a token

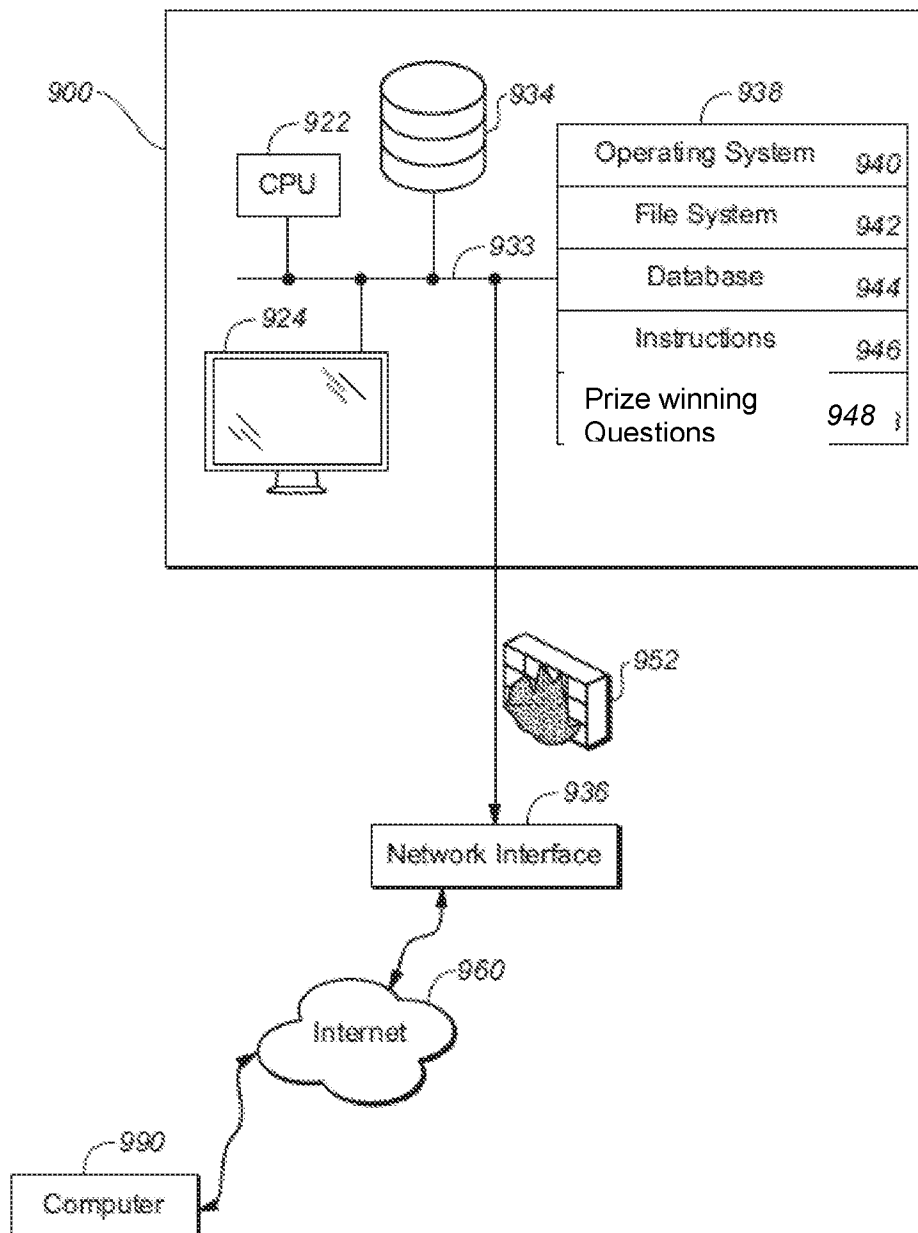


Spin the globe
any time to start
the game



Items you add to your
Wish List get added to
your globe

FIG. 2



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2017/045795

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06Q 30/02; G06Q 30/00; G06F 17/30; A63F 9/24 (2017.01)

CPC - G06Q 30/0255; G06Q 30/0247; G06Q 30/02; G06Q 30/0267; G06Q 30/0261 (2017.08)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 705/14.53; 705/14.64; 705/14.49; 705/26 (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2014/0344034 A1 (UNLOCKABLE, INC.) 20 November 2014 (20.11.2014) entire document	1
A	US 2006/0154657 A1 (INSELBERG) 13 July 2006 (13.07.2006) entire document	1
A	US 2007/0087833 A1 (FEENEY et al) 19 April 2007 (19.04.2007) entire document	1
A	US 2003/0054888 A1 (WALKER et al) 20 March 2003 (20.03.2003) entire document	1
A	US 2002/0120504 A1 (GOULD et al) 29 August 2002 (29.08.2002) entire document	1
A	US 6,565,442 B2 (LA MURA et al) 20 May 2003 (20.05.2003) entire document	1
A	US 2015/0278842 A1 (THIAM) 01 October 2015 (01.10.2015) entire document	1

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

27 September 2017

Date of mailing of the international search report

13 OCT 2017

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Facsimile No. 571-273-8300

Authorized officer

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774