Title: ASSOCIATING COMPETITIVE PRODUCT AND PRICE DATA WITH WEBSITE ANALYTICS

Abstract: A method includes receiving at least one search criterion identifying at least one reservation-based product offered by a client website. The at least one search criterion is submitted to a competitor website offering the at least one product. A first descriptor of a first said product matching the at least one search criterion and a first purchase price for which the first product may be purchased from the client website is received from the client website. A second descriptor of a second said product matching the at least one search criterion and a second purchase price for which the second product may be purchased from the competitor website is received from the competitor website. The second descriptor and the second purchase price are submitted to the web analytics system.
ASSOCIATING COMPETITIVE PRODUCT AND PRICE DATA WITH
WEBSITE ANALYTICS

PRIORITY CLAIM

[0001] This application claims the benefit of priority to U.S. Provisional Patent
Application Serial No. 62/171,954, filed June 8, 2015, which is hereby incorporated by
reference as if fully set forth herein.

BACKGROUND OF THE INVENTION

[0002] It is easy for a website administrator to track online user behavior in web
analytics systems such as, for example, Google® Analytics. It is also reasonably easy to
scrape product information, such as airfares, from a competing airline's website.

[0003] However, it is very difficult to combine the web analytics or the like data
with the competing airfare data (about products and prices) (about online users' behaviors) with the competing airfare data (about products and prices). The challenge is to answer questions like "what was the effect of competing airfares
simultaneously offered on competing websites) on behavior of any of the users of my
website?"

[0004] A web analytics system may have a data model of "users," "sessions,
"products," and "transactions." Products are typically identified by a SKU that is common
"products," and "transactions." Products are typically identified by a SKU that is common

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across many retailers. Product attributes, such as the product name and price, are typically
associated with the SKU.

Some industries, such as travel (airlines, hotels, etc.), don't use SKUs or
product names. Travel products don't fit neatly into the data model of web analytics systems
or the like. Also, travel prices can change every time a user executes a search.

Ideally, one could discover the products and prices that a competitor is offering at the time
that the consumer is browsing our website, and we could see this competitive product and
price data in our web analytics system alongside information about what products and prices
our website offered to each user.

However, even if one fetched data from the competitor's website at regular
intervals for updated competitive product and price information, one could not import this
fetched data into the web analytics system in a useable way. It would be technically or
commercially difficult to fetch competitive data about every possible product at sufficiently
short intervals to capture every product and price change made by competitors. Using prior
art methods, one might try to proactively import such competitive data (about competitors'
product and prices changes) into the web analytics system, but such methods would corrupt
the competitive product and price information associated with one's past users. In summary,
using prior art methods, there is no good way to associate information about what products
and prices users would see on competing websites or systems with the information about
and prices users would see on competing websites or systems with the information about
what products and prices users concurrently saw on our website or systems.

BRIEF DESCRIPTION OF THE DRAWINGS

Preferred and alternative examples of the present invention are described in
detail below with reference to the following drawings:

FIG. 1 is a schematic view of an exemplary operating environment in which
an embodiment of the invention can be implemented;
FIG. 2 is a functional block diagram of an exemplary operating environment in which an embodiment of the invention can be implemented; FIG. 3 is a flow diagram illustrating a method according to an embodiment of the invention; FIGS. 4A-4C show a flow diagram illustrating in greater detail the method illustrated in FIG. 3; FIGS. 5-6 illustrate exemplary comparative data according to an embodiment of the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

This patent application is intended to describe one or more embodiments of the present invention. It is to be understood that the use of absolute terms, such as "must," "will," and the like, as well as specific quantities, is to be construed as being applicable to one or more of such embodiments, but not necessarily to all such embodiments. As such, embodiments of the invention may omit, or include a modification of, one or more features or functionalities described in the context of such absolute terms.

An embodiment enables an entity to discover what reservation-based products online consumers are searching for, discover competitive product and price data from competitors’ websites or systems, and associate on a web analytics system the discovered competitive data with only that particular entity's data and/or the data associated with the search information entered by a particular consumer. For purposes of this disclosure, search information entered by a particular consumer. For purposes of this disclosure, "reservation-based product" refers to services, such as air travel reservations, hotel reservations, car-rental reservations, and the like, that can be purchased online. These services may be dynamically created/packaged based on the search criteria entered by a consumer.

FIG. 1 is a functional block diagram of an exemplary operating environment in which one or more embodiments of the invention may be implemented or with which one or more embodiments may cooperate. The electronic device 100, as illustrated, is an example of a suitable electronic device.
computing environment; however it is appreciated that other environments, systems, and
deVICES, may be used to implement various embodiments of the invention as described in
more detail below.

[0017] Embodiments of the invention may be operational with numerous general-

purpose or special purpose computing system environments or configurations. Examples of
well-known computing systems, environments, and/or configurations that may be suitable for
well-known computing systems, environments, and/or configurations that may be suitable for
use with embodiments of the invention include, but are not limited to, personal computers,
server computers, hand-held or laptop devices, multiprocessor systems, microprocessor-based
server computers, hand-held or laptop devices, multiprocessor systems, microprocessor-based
systems, set-top boxes, programmable consumer electronics, network PCs, minicomputers,
mainframe computers, distributed computing environments that include any of the above
systems or devices, and the like.

[0018] Embodiments of the invention may be described in the general context of
computer-executable instructions, such as program modules being executed by a computer.
Generally, program modules include routines, programs, objects, components, data
structures, etc. that perform particular tasks or implement particular abstract data types.

Embodiments of the invention may also be practiced in distributed-computing environments
where tasks are performed by remote processing devices that are linked through a
communications network. In a distributed computing environment, program modules may be
located in both local and remote computer storage media including memory storage devices.
Additionally, the entity that may implement, or otherwise provide the ability to implement,
elements of the invention may be referred to herein as an "administrator," elements of embodiments of the invention may be referred to herein as an "administrator."

[0019] With reference to FIG. 1, an exemplary system for implementing an

[0019] With reference to FIG. 1, an exemplary system for implementing an
embodiment of the invention includes an electronic device 100. The electronic device 100
embodiment of the invention includes an electronic device 100. The electronic device 100
typically includes at least one processing unit 102 and memory 104.

[0020] Depending on the exact configuration and type of electronic device, memory
104 may be volatile (such as random-access memory (RAM)), nonvolatile (such as read-only
memory (ROM), flash memory, etc.) or some combination of the two. This most basic
configuration is illustrated in FIG. 1 by dashed line 106.
Additionally, the device 100 may have additional features, aspects, and functionality. For example, the device 100 may include additional storage (removable and/or non-removable) which may take the form of, but is not limited to, magnetic or optical disks or tapes. Such additional storage is illustrated in FIG. 1 by removable storage 108 and non-removable storage 110. Computer storage media includes volatile and nonvolatile, removable removable storage 110. Computer storage media includes volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of and non-removable media implemented in any method or technology for storage of information such as computer-readable instructions, data structures, program modules or other data. Memory 104, removable storage 108 and non-removable storage 110 are all examples of computer storage media. The device 100 may also include communications connection 112 that allows the device 100 to communicate with other devices. The communications connection 112 is an example of communications media. Communication media typically embodies computer-readable instructions, data structures, program modules or other data in a modulated data signal, such as a carrier wave or other transport mechanism and includes any information delivery media. The term "modulated data signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal. By way of example, the communication media includes wired media such as a wired network or wireless media such as acoustic, radio-frequency (RF), infrared and other wireless media. The term computer-readable media as used herein includes both storage media and communication media.

The device 100 may also have an input device 114 such as keyboard, mouse, pen, voice-input device, "touch-input device," etc. Further, an output device 116 such as a pen, voice-input device, touch-input device, etc. Further, an output device 116 such as a...
According to one or more embodiments, the combination of software or computer-executable instructions with a computer-readable medium results in the creation of computer-executable instructions with a computer-readable medium results in the creation of a machine or apparatus. Similarly, the execution of software or computer-executable instructions by a processing device results in the creation of a machine or apparatus, which may be distinguishable from the processing device, itself, according to an embodiment.

Correspondingly, it is to be understood that a computer-readable medium is transformed by storing software or computer-executable instructions thereon. Likewise, a processing device is transformed in the course of executing software or computer-executable instructions. Additionally, it is to be understood that a first set of data input to a processing device during, or otherwise in association with, the execution of software or computer-executable instructions by the processing device is transformed into a second set of data as a consequence of such execution. This second data set may subsequently be stored, displayed, or otherwise communicated. Such transformation, alluded to in each of the above examples, may be a consequence of, or otherwise involve, the physical alteration of portions of a computer-readable medium. Such transformation, alluded to in each of the above examples, may also be a consequence of, or otherwise involve, the physical alteration of, for example, the states of registers and/or counters associated with a processing device during execution of software or computer-executable instructions by the processing device.

As used herein, a process that is performed "automatically" may mean that the process is performed as a result of machine-executed instructions and does not, other than the establishment of user preferences, require manual effort.

Referring now to FIG. 2, an embodiment of the present invention may take the form, and/or may be implemented using one or more elements, of an exemplary computer network system 200. The system 200 includes an electronic client device 210, such as a personal computer or workstation, tablet or smart phone, that is linked via a communication medium, such as a network 220 (e.g., the Internet), to an electronic device or system, such as a network 220 (e.g., the Internet), to an electronic device or system, such as...
a server 230. The server 230 may further be coupled, or otherwise have access, to a database
240 and a computer system 260. Although the embodiment illustrated in FIG. 2 includes one
server 230, it should be recognized that several servers 230 coupled to one client device 210 via the network 220, it should be recognized that
embodiments of the invention may be implemented using one or more such client devices
coupled to one or more such servers.

[0028] The client device 210 and the server 230 may include all, more than or fewer
features associated with the device 100 illustrated in and discussed with reference to FIG. 1. The client device 210 includes or is otherwise coupled to a computer
screen or display 250. The client device 210 may be used for various purposes such as
screen or display 250. The client device 210 may be used for various purposes such as

[0030] The server 230 may be coupled to database 240 to retrieve information
therefrom and to store information thereon. Database 240 may have stored therein data (not shown) that can be used by the server 230 to enable performance of various aspects of
embodiments of the invention. Additionally, the server 230 may be coupled to the computer
system 260 in a manner allowing the server to delegate certain processing functions to the
system 260 in a manner allowing the server to delegate certain processing functions to the
computer system. In an embodiment, the client device 210 may bypass network 220 and
communicate directly with computer system 260.

[0031] FIG. 3 illustrates a process 300 according to an embodiment of the invention
by at least one processing device communicating across a network with at least one of a user
by at least one processing device communicating across a network with at least one of a user
device, a browser application, a client website and a web analytics system/service such as, for example,
Google Analytics. The process 300 is implementable in various systems such as, for example,
discrete blocks. The process 300 may be implementable in any suitable hardware, software,
firmware, or combination thereof. The order in which the operations are described is not to be necessarily construed as a limitation.

[0032] At a block 310, search criteria identifying at least one reservation-based product (e.g., airline travel) offered by the client website is received by an administrator of a product according to an embodiment. For example, and referring to FIGS. 4A-4C (collectively referred to hereinafter simply as FIG. 4), a user (consumer), at step 1, submits (collectively referred to hereinafter simply as FIG. 4), a user (consumer), at step 1, submits search criteria via browser 270 and network 220 to the website of a client (identified in FIG. 4 as Airline A) of the administrator (identified in FIG. 4 as QL2). Such search criteria may include any combination of, for example, flight destination(s), number of passengers, date(s), etc. (e.g., number of passengers, date(s), etc. on which flight(s) will occur, preferred time of flight(s) on such date(s), etc.)

[0033] In an embodiment, as is illustrated at step 3a in FIG. 4, the administrator generates and provides to the administrator a search-result identifier that uniquely corresponds to the search generated by the user upon the user’s submission of the search criteria to the client. Alternatively, the administrator can receive the search criteria and search-result identifier directly from the script element 280 via the browser application 270.

[0034] At a block 320, the search criteria are submitted, preferably within fifteen minutes (i.e., "near-simultaneous", as defined in the travel-booking industry) of receiving the search criteria from the client website, to a competitor website offering the product. For example, and referring to FIG. 4, at step 4 the server 230 of the administrator provides the search criteria to the client website, to a competitor website offering the product. For example, and referring to FIG. 4, at step 4 the server 230 of the administrator provides the search criteria to the websites of Airline A’s competitors, Airlines B and C, via network 220.

[0035] At a block 330, and in response to receiving the search criteria from the user, a descriptor of a product matching the search criteria and a purchase price for which the product may be purchased from the client’s website are received from the client’s website. If the server 230 of the administrator provides the search criteria to the websites of Airline A’s competitors, Airlines B and C, via network 220, in an embodiment, the search criteria are simultaneously submitted to Airlines B and C. Alternatively, the search criteria are simultaneously submitted to Airlines B and C. Alternatively, the search criteria are submitted to Airline C within a predetermined time period (e.g., 15 minutes) after the search criteria are submitted to Airline B.
system. For example, and referring to FIG. 4, at step 3b Airline A's website provides to the server 230 of the administrator an identification of a flight meeting the search criteria and the purchase price for the flight. Alternatively, if the script element 280 described above herein is employed, the server 230 of the administrator can directly receive the flight identification and purchase price from the browser 270. Additionally, at step 3c Airline A's website and purchase price from the browser 270. Additionally, at step 3c Airline A's website provides to the web analytics system the identification of a flight meeting the search criteria and the purchase price for the flight, as well as the associated search-result identifier.

[0036] In an embodiment, the server 230 of the administrator receives the search criteria from the client website before the client website identifies the descriptor and purchase price. As such, the search criteria are available to the server 230 for submission to the web analytics system. For example, referring to FIG. 4, at step 5 the web analytics system can provide to the server 230 of the administrator an identification of a flight meeting the search criteria and the purchase price for each such flight.

[0037] At a block: 340, the server 230 of the administrator receives from the competitor websites: competitor descriptors of products matching the search criteria and competitor purchase prices, for which the prices may be purchased from the competitor websites. For example, and referring to FIG. 4, at step 5 the websites of Airlines B and C provide to the server 230 of the administrator an identification of respective flights offered by Airlines B and C meeting the search criteria and the purchase prices for each such flight.

[0038] In an embodiment, and upon receiving from Airlines A, B and C values associated with the identification of flights meeting the search criteria and the purchase prices for such flights, server 230 can calculate or otherwise determine comparative data that may include, for example, maximums, minimums and differences among such values. Examples include, for example, maximums, minimums and differences among such values. Examples and descriptions of such comparative data are shown in FIGS. 5-6.

[0039] At a block: 350, the server 230 of the administrator submits the comparative data to the web analytics system over network 220, along with the associated search-result identifier, as illustrated at step 7 of FIG. 4. The search-result identifier provided to the administrator at step 3a allows the web analytics system to correlate the information sent to the administrator.
the web analytics system by Airline A at step 3c exclusively with the information sent to the
web analytics system by the server 230 of the administrator at step 7.

Consequently, the inventive concepts discussed herein yield a distinct economic benefit: expressed in the context of FIG. 4, Airline A, by viewing the comparative
data via the web analytics system, is provided an opportunity to dynamically adjust and optimize its pricing, in near-real-time and before Airlines B, C, etc. can similarly optimize its pricing, in near-real-time and before Airlines B, C, etc. can similarly competitively adjust their pricing. Additionally, Airline A can discover the effect of competitively adjust their pricing. Additionally, Airline A can discover the effect of competitors' prices on Airline A's consumers. For example, Airline A might find that Airline B providing lower prices for comparable flights affects Airline A's sales, whereas Airline C having providing lower prices for comparable flights does not affect Airline A's sales. Consequently, Airline A knows to match Airline B's prices but not Airline C's prices.

While the preferred embodiment of the invention has been illustrated and described, many changes can be made without departing from the spirit and scope of the invention. Accordingly, the scope of the invention is not limited by the disclosure of the preferred embodiment. Instead, the invention should be determined entirely by reference to the claims that follow.
What is claimed is:

1. A method performed by at least one processing device communicating across a network with a client website and a web analytics system, the method comprising the steps of:
   - receiving from the client website at least one search criterion identifying at least one reservation-based product offered by the client website, the at least one search criterion being automatically received from the client website in response to a user submitting at least one search criterion to the client website;
   - one search criterion to the client website;
   - submitting the at least one search criterion to a first competitor website offering said at least one product;
   - receiving from the client website a first descriptor of a first said product matching the at least one search criterion and a first purchase price for which the first product may be purchased from the client website;
   - receiving from the first competitor website a second descriptor of a second said product matching the at least one search criterion and a second purchase price for which the second product may be purchased from the first competitor website;
   - submitting to the web analytics system the second descriptor and the second purchase price.

2. The method of claim 1, wherein:

   - the client website identifies the first descriptor and first purchase price in response to receiving the at least one search criterion from a user; and
   - the at least one search criterion are received from the client website before the client website identifies the first descriptor and first purchase price.

3. The method of claim 1, further comprising the steps of:

   - calculating a difference between the first and second purchase prices; and
   - submitting to the web analytics system the calculated difference.

4. The method of claim 1, further comprising the steps of:

   - simultaneously with submitting the at least one search criterion to the first competitor website, submitting the at least one search criterion to a second competitor website offering said at least one product;
receiving from the second competitor website a third descriptor of a third said product matching the at least one search criterion and a third purchase price for which the third product may be purchased from the second competitor website; and
submitting to the web analytics system the third descriptor and the third purchase price.

5. The method of claim 1, further comprising the steps of:
within a predetermined time period of submitting the at least one search criterion to the first competitor website, submitting the at least one search criterion to a second competitor website offering said at least one product;
receiving from the second competitor website a third descriptor of a third said product matching the at least one search criterion and a third purchase price for which the third product may be purchased from the second competitor website; and
submitting to the web analytics system the third descriptor and the third purchase price.

6. The method of claim 1, wherein the at least one search criterion is submitted to the first competitor website within fifteen minutes of receiving the at least one search criterion from the client website.

7. The method of claim 3, wherein the calculated difference comprises a numeric price difference.

8. The method of claim 3, wherein the calculated difference comprises a percentage price difference.

9. A method performed by at least one processing device communicating across a network with a user browser application, a client website and a web analytics system, the method comprising the steps of:
receiving from the browser application at least one search criterion identifying at least one reservation-based product offered by and submitted by the user to the client website;
submitting the at least one search criterion to a first competitor website offering said at least one product; at least one search criterion to a first competitor website offering said at least one product;
receiving from the client website a first descriptor of a first said product matching the
at least one search criterion, and a first purchase price for which the first product may be
purchased from the client website;
receiving from the first competitor website a second descriptor of a second said
product, matching the at least one search criterion and a second purchase price for which the
second product may be purchased from the first competitor website; and
submitting to the web analytics system the second descriptor and the second purchase
price.

10. The method of claim 9, wherein the first descriptor and first purchase price are
received directly from the browser application.

11. The method of claim 9, wherein:
the client website identifies the first descriptor and first purchase price in response to
receiving the at least one search criterion from a user; and
the at least one search criterion are received from the client website before the client
website identifies the first descriptor and first purchase price.

12. The method of claim 9, further comprising the steps of:
calculating a difference between the first and second purchase prices; and
submitting to the web analytics system the calculated difference.

13. The method of claim 9, wherein the at least one search criterion is submitted
to the first competitor website within fifteen minutes of receiving the at least one search
criterion from the client website.

14. The method of claim 12, wherein the calculated difference comprises a
percentage price difference.

15. At least one computer-readable medium on which are stored instructions that,
when executed by at least one processing device communicating across a network with a web
analytics system, enable the at least one processing device to perform a method, the method
comprising the steps of:
receiving at least one search criterion identifying at least one reservation-based product offered by the client website; submitting the at least one search criterion to a first competitor website offering said at least one product; receiving from the client website a first descriptor of a first said product matching the at least one search criterion and a first purchase price for which the first product may be purchased from the client website; and
submitting to the web analytics system the first descriptor and the first purchase price.

165. The medium of claim 15, wherein:
the client website identifies the first descriptor and first purchase price in response to receiving the at least one search criterion from a user; and
the at least one search criterion are received from the client website before the client website identifies the first descriptor and first purchase price.

17. The medium of claim 15, wherein the method further comprises the steps of:
calculating a difference between the first and second purchase prices; and
submitting to the web analytics system the calculated difference.

18. The medium of claim 15, wherein the method further comprises the steps of:
simultaneously with submitting the at least one search criterion to the first competitor website, submitting the at least one search criterion to a second competitor website offering said at least one product;
receiving from the second competitor website a third descriptor of a third said product matching the at least one search criterion and a third purchase price for which the third product may be purchased from the second competitor website; and
submitting to the web analytics system the third descriptor and the third purchase price.
19. The medium of claim 15, wherein the at least one search criterion is submitted to the first competitor website within fifteen minutes of receiving the at least one search criterion from the client website.

20. The medium of claim 17, wherein the calculated difference comprises a numeric price difference.
Fig. 3

1. Receive Search Criteria 310
2. Submit Criteria to Competitor 320
3. Receive Client Product/Price Info 330
4. Receive Competitor Product/Price Info 340
5. Submit Competitor Product/Price Info 350
4. For each Search Result, QL2 submits search to Airline B and C’s websites:
   - From
   - To
   - Dates
   - Passengers

5. Airline B and C’s websites respond with:
   - Flight(s)
   - Price(s)

**Fig. 4A**
1. Consumer submits search to Airline A's website:
   - From
   - To
   - Dates
   - Passengers

Consumer

2. For each Search Result, Airline A's website responds with Airline A's:
   - Flight(s)
   - Price(s)

3a. For each Search Result, Airline A's website application communicates to QL2:
   - Search Result ID
   - Consumer's search request
     - From
     - To
     - Dates
     - Passengers

3b. For each Search Result, Airline A's website application communicates to QL2:
   - Search Result ID
   - Airline A
     - Flight(s)
     - Price(s)

3c. For each Search Result, Airline A's website sends to web Analytics:
   - Search Result ID
   - Consumer's search request
     - From
     - To
     - Dates
     - Passengers etc.
   - Airline A's search results
     - Airline A's offered flight(s)
     - Airline A's offered price(s)
   - Any other web analytics data that a web browser or web application typically sends to Google Analytics

QL2 Competitive Price Shopping System

For each Search Result, get competitors' flight(s) and price(s) given consumer's original search request.

6. For each Search Result
   - Search Result ID
   - Competitor B
     - Flight(s)
     - Prices(s)
   - Competitor C
     - Flight(s)
     - Price(s)
QL2 compares Airline A’s flight(s) & price(s) versus Competitor Airlines B and C’s flight(s) and price(s).

For each Search Result, QL2 calculates relative differences between Airline A’s flight(s) and price(s) and Competitors’ flight(s) and price(s) (e.g. GREATER THAN).

7. For Each Search Result, QL2 sends to Airline A’s web Analytics system:
   - Search Result ID
   - Competitor B
     - Flight(s)
       - Relative comparisons versus Airline A
     - Price(s)
       - Relative comparisons versus Airline A
   - Competitor C
     - Flight(s)
       - Relative comparisons versus Airline A
     - Price(s)
       - Relative comparisons versus Airline A

Analytics is able to associate this imported data to the correct consumer session based on the Search Result ID.

8. For each search that consumers submitted on A’s website, web Analytics is able to report on
   - Search Result ID
   - Consumer’s search request (From, To, etc.)
   - Airline A’s Flight(s) and Price(s)
   - Other typical web analytics data
   - Airline B’s Flight(s) and Price(s)
   - Airline C’s Flight(s) and Price(s)
   - Relative Comparisons between A’s Flight(s) and Price(s) and B and C’s flight(s) and price(s)

Fig. 4C
• **Search Result ID**
  o Primary key
• **Lowest Price of Day**
  o Example Value: 250
  o Lowest price of the day from all competitors (not the airline using the invention) given the search’s FROM, TO, DATES, and PASSENGERS input. No consideration to departure times or flight durations.
• **Lowest Price of Day Brand**
  o Example Value: Delta Airlines
  o Airline with the Lowest Price of Day
• **Lowest Price of Day Outgoing Flight Numbers**
  o Example Value: 123
  o Description: The outgoing flight number(s) of the Lowest Price of Day
  o Use: As Web Analytics user drills-down into detail for a specific Search Id, display the cheapest outgoing flight numbers of the day.
• **Lowest Price of Day Return Flight Numbers**
  o Example Value: 321
  o Description: The return flight number(s) of the Lowest Price of Day
  o Use: As Web Analytics user drills-down into detail for a specific Search ID, display the cheapest return flight numbers of the day.
• **Versus Lowest Price of Day**
  o Permitted values: HIGHER, LOWER, EQUAL
  o Description: Relative price of Airline A versus Lowest Price of Day
  o Use: for grouping all searches (or associated user-sessions) within Web Analytics where Airline A’s price was HIGHER, LOWER, or EQUAL to competitors.
  o Web Analytics Example Report: Display all user-sessions where Airline A had the HIGHER price and user completed the purchase.
• **Percentage Difference versus Lowest Price of Day**
  o Permitted values: 1-10%, 10-20%, (1-10%), (10-20%), etc.
  o Description: Percentage difference in price between Airline A and Lowest Fare of Day.
  o Negative values indicate that Airline A was cheaper.
  o Use: Similar to Lowest Fare of Day, but indicates how much more expensive or cheaper Airline A versus competition. Uses bands of values (instead of exact percentage) so Web Analytics can group together searches where Airline A was relatively the same price versus competitors.
• **Difference versus Lowest Price of Day**
  o Example value: 45
  o Description: The exact price difference between Airline A and Lowest Price of Day.
  o Use: as Web Analytics user drills-down into detail for a specific Search ID, display the exact price difference.
• **Competing Product Price**
  o Example Value: 250
Lowest price of the day from all competitors (not the airline using the invention) given the search’s FROM, TO, DATES, and PASSENGERS input. Only competitors’ flights with similar departure times and flight durations are considered.

**Fig. 5**
• **Competing Product Brand**
  - Example value: Delta Airlines
  - Description: The competing Airline offering the Competing Product Price.
  - Use: As Web Analytics user drills-down into detail for a specific Search ID, display the competitor with the cheapest competing flight.

• **Competing Product Outgoing Flight Numbers**
  - Example Value: 123
  - Description: The outgoing flight number(s) of the flights with the Competing Product Price.
  - Use: As Web Analytics user drills-down into detail for a specific Search ID, display the cheapest competing outgoing flight numbers of the day.

• **Competing Product Return Flight Numbers**
  - Example Value: 321
  - Description: The return flight number(s) of the flights with the Competing Product Price.
  - Use: As Web Analytics user drills-down into detail for a specific Search ID, display the cheapest competing return flight numbers of the day.

• **Versus Competing Product Price**
  - Permitted values: HIGHER, LOWER, EQUAL
  - Description: Relative price of Airline A versus Competing Product Price.
  - Use: For grouping all searches (or associated user-sessions) within Web Analytics where Airline A’s price was HIGHER, LOWER, or EQUAL to competitors.
  - Web Analytics Example Report: Display all user-sessions where Airline A had the HIGHER price and user completed the purchase.
  - Note: Web Analytics is not capable of determining HIGHER, LOWER, or EQUAL on its own. We must tell Web this information as we load the competitive data.

• **Percentage Difference versus Competing Product Price**
  - Permitted values: 1-10%, 10-20%, (1-10%), (10-20%), etc.
  - Description: Percentage difference in price between Airline A versus Competing Product Price. Negative values indicate that Airline A was cheaper.
  - Use: Similar to above, but indicates how much more expensive or cheaper Airline A versus competition. Uses bands of values (instead of exact percentage) so Web Analytics can group together searches where Airline A was relatively the same price versus competitors.

• **Difference versus Competing Product Price**
  - Example value: 45
  - Description: The exact price difference between Airline A and Competing Product Price.
  - Use: As Web Analytics user drills-down into detail for a specific Search ID, display the exact price difference.

• **Advance Purchase**
  - Example value: 21
  - Description: Number of days between now and the trip’s departure date
  - Web Analytics Example Report: Display all user-sessions where Airline A had the HIGHER price and Advance Purchase >14

• **OTA Price**
  - Example Value: 275
  - Lowest price of the day from an OTA (Online Travel Agencies) selling the same exact flights as Airline A for this Search Result ID.

• **OTA Name**
  - The Online Travel Agency offering the OTA Price.

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**Fig. 6**
A. CLASSIFICATION OF SUBJECT MATTER
G06Q 30/02(2012.01)1, G06Q 10/06(2012.01)1, G06F 17/30(2006.01)1

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)
G06Q 30/02; G06F 17/30; G06F 7/00; G06Q 10/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords: product, price, website, analytics, competitor

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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<td>US 2006-0265361 A1 (WILLIAM W.Y. CHU) 23 November 2006 See abstract, paragraphs [0007], [0076], claim 1 and figure 6b.</td>
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Further documents are listed in the continuation of Box C. See patent family annex.

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Date of the actual completion of the international search
20 September 2016 (20.09.2016)

Date of mailing of the international search report
20 September 2016 (20.09.2016)

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