

(51) International Patent Classification:  
**G06Q 10/00** (2006.01)

(21) International Application Number:

PCT/US2010/027392

(22) International Filing Date:

16 March 2010 (16.03.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/424,638 16 April 2009 (16.04.2009) US

(71) Applicant (for all designated States except US): **THE BOEING COMPANY** [US/US]; 100 North Riverside Plaza, Chicago, Illinois 60606-2016 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **QUADRACCI, Leonard, J.** [US/US]; 3008 Belvidere Avenue SW, Seattle, Washington 98126 (US).(74) Agents: **COUSINS, Clifford, G** et al.; The Boeing Company, P.O. Box 2515, MC 110-SD54, Seal Beach, CA 90740-1515 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, 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.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, SE, SI, SK, SM,

[Continued on next page]

(54) Title: ASSOCIATE MEMORY LEARNING AGENT TECHNOLOGY FOR TRAVEL OPTIMIZATION AND MONITORING

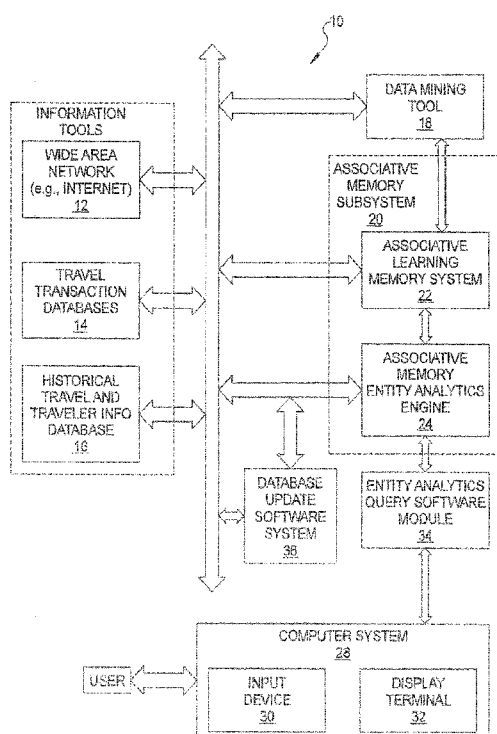


FIGURE 1

(57) Abstract: A method for managing and analyzing travel information. The method may involve using an associative learning memory to store a plurality of entities, each one of the entities being relating to a specific piece of travel related information. The method may further involve using an input device that allows a user to input a travel plan or travel expense report (TER) relating to specific travel related information. The method may further involve using an entity analytics engine responsive to the input device to search the associative learning memory for specific ones of the entities that are related to the travel plan or the TER input by the user. The method may conclude with displaying the entities retrieved by the entity analytics engine on a display for consideration by the user.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, —  
ML, MR, NE, SN, TD, TG).

*before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments (Rule 48.2(h))*

**Published:**

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

**(88) Date of publication of the international search report:**

9 December 2010

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2010/027392

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06Q 10/00 (2010.01)

USPC - 705/5

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)

IPC(8) - G06Q 10/00; G06Q 30/00; G06Q 40/00 (2010.01)

USPC - 705/5, 6, 30

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

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

PatBase, Google Patents, Google Scholar

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|------------------------------------------------------------------------------------|-----------------------|
| Y         | US 2006/0212321 A1 (VANCE et al) 21 September 2006 (21.09.2006) entire document    | 1-12                  |
| Y         | US 2004/0083232 A1 (RONNEWINKEL et al) 29 April 2004 (29.04.2004) entire document  | 1-12                  |
| A         | US 2008/0126143 A1 (ALTMAN et al) 29 May 2008 (29.05.2008) entire document         | 1-12                  |
| A         | US 2007/0083401 A1 (VOGEL et al) 12 April 2007 (12.04.2007) entire document        | 1-12                  |
| A         | US 2003/0120526 A1 (ALTMAN et al) 26 June 2003 (26.06.2003) entire document        | 1-12                  |

☐ Further documents are listed in the continuation of Box C.


\* 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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

06 October 2010

Date of mailing of the international search report

**14 OCT 2010**

Name and mailing address of the ISA/US

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

Facsimile No. 571-273-3201

Authorized officer:

Blaine R. Copenheaver

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