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Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

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

— *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))*

[Continued on next page]

(54) Title: PROVIDING INFORMATION TO A USER BASED ON DETERMINED USER ACTIVITY

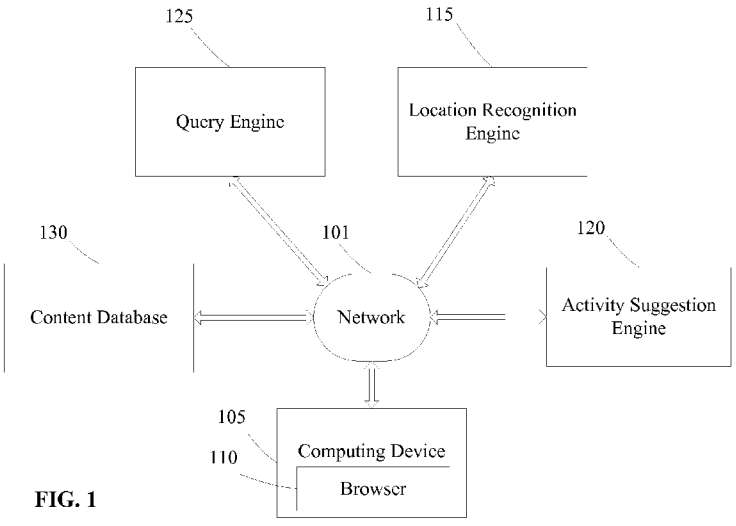


FIG. 1

(57) Abstract: Methods and apparatus related to identifying a plurality of user locations, determining an activity of the user based on the identified user locations, and providing information to the user based on the determined activity of the user. In some implementations, the information may be a user activity suggestion for a user to perform. In some implementations, the information may be provided to the user in response to input from the user. In some implementations, the input may be a search query and the information may be search results. In some implementations, the input may be a partial query and the information may be query suggestions.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US14/44147

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04W 4/02 (2015.01)
CPC - H04W 4/02
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) Classifications: H04W 4/02; G06Q 30/02; G01C 21/34 (2015.01)
CPC Classifications: H04W 4/02; G06Q 30/02; G01C21/3617

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)
PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data); ProQuest; IP.com; Google
Keywords: identify, activity, location, suggest

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2009/0073033 A1 (PRICE, R) 19 March 2009, paragraphs [0034]-[0035].	1-3, 7, 8, 10, 19, 21, 22
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Y		4-6 and 20
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A		9
Y	US 2007/0219706 A1 (SHEYNBLAT, L) 20 September 2007, paragraphs [0037] and [0045].	4-6 and 20
A	US 2011/0246268 A1 (SATAVOLU, R et al.) 6 October 2011, paragraphs [0008], [0071], and [0072].	9
A	US 2011/0251990 A1 (YARVIS, M et al.) 13 October 2011, paragraph [0022].	9
A	US 2008/0125959 A1 (DOHERTY, S et al.) 29 May 2008, entire document.	1-10 and 19-22

☐ 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	Date of mailing of the international search report
18 June 2015 (18.06.2015)	08 JUL 2015
Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US14/44147

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1-10 and 19-22 are directed toward a method and syystem of providing a user activity suggestion..

Group II: Claims 11-18 are directed toward a method of providing results for a user input based on a determined user activity.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

-***-See Supplemental Page-***-

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-10 and 19-22

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/US14/44147

-***-Continued from Box III: Lack of Unity of Invention-***-
The special technical features of Group I include determining, utilizing one or more of the processors, a user activity suggestion based on the determined user activity; and providing, utilizing one or more of the processors, the user activity suggestion as a recommendation to the user, which are not present in Group II.

The special technical features of Group II include receiving, utilizing one or more of the processors, a user input; providing, utilizing one or more of the processors, one or more results for the user input based on the determined user activity, which are not present in Group I.

The common technical features shared by Groups I and II are a method, comprising: identifying, utilizing one or more processors, a plurality of user locations over a time period; determining, utilizing one or more of the processors, a user activity based on the user locations; and providing, utilizing one or more of the processors, an output to the user.

However, these common features are previously disclosed by US 2009/0073033 A1 to Price, R (hereinafter 'Price'). Price discloses a method, comprising: identifying, utilizing one or more processors, a plurality of user locations over a time period (system processes user location traces over a period of time, paragraph [0024]); determining, utilizing one or more of the processors, a user activity based on the user locations (system infers user activity based on location traces and venue information, paragraph [0022]); and providing, utilizing one or more of the processors, an output to the user (system may now know that the user might enjoy the activity of ordering take out food at a specific time and weather condition in response to a future user query, paragraph [0035]).

Since the common technical features are previously disclosed by the Price reference, these common features are not special and so Groups I and II lack unity.