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[Continued on next page]

(54) Title: APP RECOMMENDATION USING CROWD-SOURCED LOCALIZED APP USAGE DATA

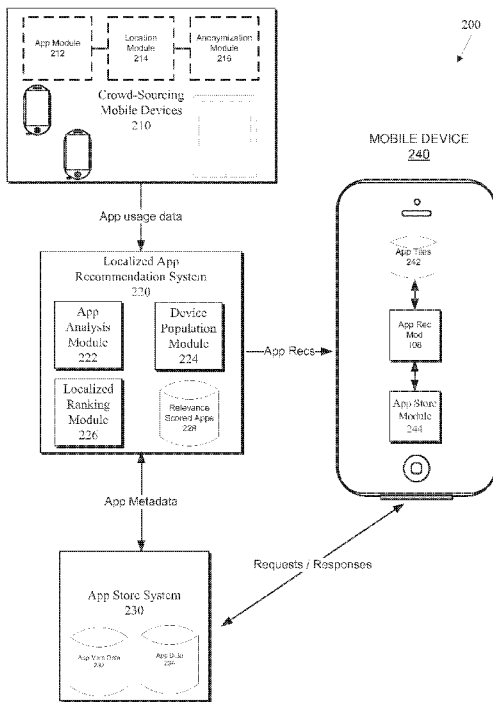


FIG. 2

(57) Abstract: Apps may be tagged with location data when they are used. Mobile device may anonymously submit app usage data. Aggregated app usage data from many mobile devices may be analyzed to determine apps that are particularly relevant to a given location (i.e., exhibiting a high degree of localization). Analysis may include determining the app usage intensity, whether hotspots exist or not at a given location, the spatial entropy of a particular app, the device populations in a particular area, etc. Based on the localized app analysis, apps may be ranked according to local relevance, and, based on this ranking, app recommendations may be provided to a user.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 17/30 (2014.01), G06F 7/00 (2014.01)
USPC - 707/724, 707/722

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)
USPC: 707/724, 707/722; IPC(8): G06F 17/30 (2014.01), G06F 7/00 (2014.01)Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 455/452.1, 455/456.1; 701/119; 705/26.8; 709/206; 707/723, 707/769, 707/E17.014, 707/758, 707/E17.005, 707/767, 707/749; 717/173 (keyword limited; terms below)

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

PatBase; Google Scholar

Search Terms: app, application, software, program, recommend, suggest, use, usage, utilize, record, log, history, location, position, GPS, execute, launch, run, time, statistic, threshold, hotspot, relevance, polygon, map, Voronoi, server, vertices, etc.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2012/0021774 A1 (MEHTA et al.) 26 January 2012 (26.01.2012), abstract and para [0005]-[0010], [0019]-[0020], [0023], [0025], [0029]-[0038], [0043], [0046]-[0047], [0055]-[0059], [0062]-[0064], [0073], [0075], [0079]-[0081], claim 6.	1, 3-4, 6, 8-9, 12, 16, 18 ----- 2, 5, 7, 10-11, 13-15, 17, 19-20
Y	US 2011/0179449 A1 (GANESAN et al.) 21 July 2011 (21.07.2011), abstract and para [0024], [0071], [0091]-[0092], [0101]-[0102], [0149].	2, 13
Y	US 2010/0069035 A1 (JOHNSON) 18 March 2010 (18.03.2010), abstract and para [0930]-[0937], [0951].	5
Y	US 2009/0060352 A1 (DISTANTE et al.) 05 March 2009 (05.03.2009), abstract and para [0180]-[0188], [0200], claim 12.	7
Y	US 2007/0016373 A1 (HUNTER et al.) 18 January 2007 (18.01.2007), abstract and para [0076], [0120]-[0136].	10-11, 14-15, 17, 19-20

 Further documents are listed in the continuation of Box C.

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"&" document member of the same patent family

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2012/0036507 A1 (JONNALA et al.) 09 February 2012 (09.02.2012), entire document.	1-20
A	US 2012/0134548 A1 (RHOADS et al.) 31 May 2012 (31.05.2012), entire document.	1-20
A	US 2011/0320307 A1 (MEHTA et al.) 29 December 2011 (29.12.2011), entire document.	1-20
A	US 2011/0307354 A1 (ERMAN et al.) 15 December 2011 (15.12.2011), entire document.	1-20
A	US 2011/0093492 A1 (SULL et al.) 21 April 2011 (21.04.2011), entire document.	1-20
A	US 2012/0110174 A1 (WOOTTON et al.) 03 May 2012 (03.05.2012), entire document.	1-20
A	US 2011/0307478 A1 (PINCKNEY et al.) 15 December 2011 (15.12.2011), entire document.	1-20
A	US 2012/0101976 A1 (FLINN et al.) 26 April 2012 (26.04.2012), entire document.	1-20
A	US 2012/0042036 A1 (LAU et al.) 16 February 2012 (16.02.2012), entire document.	1-20