

(51) International Patent Classification:
G06F 7/00 (2006.01)(21) International Application Number:
PCT/US2013/036029(22) International Filing Date:
10 April 2013 (10.04.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/443,806 10 April 2012 (10.04.2012) US(71) Applicant: **GOOGLE INC.** [US/US]; 1600 Amphitheatre
Parkway, Mountain View, CA 94043 (US).(72) Inventor: **PAREKH, Neel**; 1600 Amphitheatre Parkway,
Mountain View, CA 94043 (US).(74) Agent: **LEE, David, Fong-Hsi**; Martine Penilla Group,
LLP, 710 Lakeway Dr., Suite 200, Sunnyvale, CA 94085
(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, BN, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU,
RW, 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, LR, LS, MW, MZ, NA, RW, SD, SL, 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,
ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: DETERMINING MUSIC IN SOCIAL EVENTS VIA AUTOMATIC CROWDSOURCING

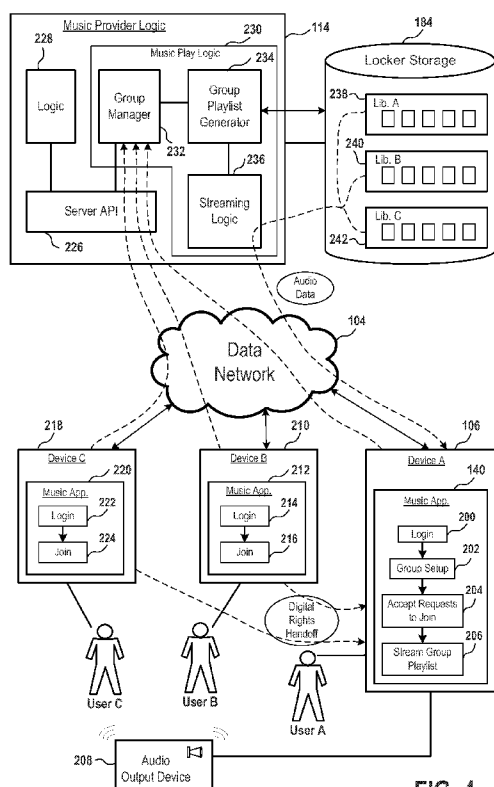


FIG. 4

(57) Abstract: A method for providing music to a group of users is provided. The method initiates with detecting a plurality of devices in proximity to each other, each of the devices having an associated user. For each user, a music library of the user is accessed to retrieve a listing of songs contained in the music library and data associated with each of the songs. The retrieved listings of songs and the associated data are analyzed to determine songs which are likely to be preferred by all of the users. A group playlist of songs is generated based on the songs which are likely to be preferred by all of the users. The songs of the group playlist are then streamed to one of the plurality of devices.

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

5 December 2013

- *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))*

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 07/00 (2013.01)

USPC - 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)

IPC(8): G01H 01/00, 07/00; G06F 07/00, 17/30 (2013.01)

USPC: 84/600, 601, 602; 707/722, 767, 999.101, 999.103, 999.105, 999.107

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)

MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPRO; IEEE; Google/Google Scholar; music*, users*, device*, user*, access*, library*, listing, songs*, preference*, metric*, group*, streaming*, rating*, playcount*, artist*, genre*, value*, local*, area*, network*, Bluetooth*, near-field*, geo-location*, communication*

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 7,786,367 B2 (HANSSON, E et al.), August 31, 2010, Figure 1-5, 9, 13 Abstract and Column 4, Lines 19-23 Column 5, Lines 25-52, Column 6, Lines 30-36, Column 6, Line 47-Column 7, Line 31, Column 7, Lines 55-66, Column 11, Lines 22-36, Column 14, Lines 52-56.	1, 2, 6-8 ----- 3-5
Y	US 2011/0246497 A1 (TORRENS, M et al.), October 6, 2011, Paragraphs [0023], [0034], [0049], [0100], [0102], [0146]-[0152]-[0156].	3-5
A	US 2008/0091717 A1 (GARROW, Z et al.), April 17, 2008, entire document.	1-14
A	US 2008/0208823 A1 (HICKEN, W et al.), August 28, 2008, entire document.	1-14

☐ 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

"&" document member of the same patent family

Date of the actual completion of the international search

10 September 2013 (10.09.2013)

Date of mailing of the international search report

11 OCT 2013

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:

Shane Thomas

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

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:

Group I: Claims 1-8; Group II: Claims 9-14; Group III: Claims 15-19

-Please 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.:
1-8

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.

-Continued from Box No. III - Observations where unity of invention is lacking-

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 1-8 are directed toward a method of providing music to a group of users, comprising: detecting a plurality of devices in proximity to each other; for each user, accessing a music library of the user to retrieve a listing of songs; analyzing the retrieved listings of songs and associated data to determine songs satisfying a preference metric; generating a group playlist to one of the plurality of devices.

Group II: Claims 9-14 are directed toward a method of providing music to a group of users, comprising: detecting a first device associated with a first user, the first user having an online music library; detecting a second device with a second user in a vicinity of the first device, the second device having an online music library; analyzing data received from the songs contained in the music libraries to determine songs which satisfy a preference metric.

Group II: Claims 15-19 are directed toward a method of providing music to a group of users, comprising: initiating a group play mode at a first device, establishing a group of users; receiving from a second device a request to join the group of users; adding the second user to the group; initiating an analysis of music libraries to determine a ranked order of songs based on a preference metric; and receiving a streamed group playlist of songs based on the ranked ordering of songs.

The common technical feature shared by Groups I, II, and III is a method for providing music to a group of users, comprising: analyzing retrieved songs and associated data to determining songs satisfying a preference metric; and streaming the songs which satisfy the performance metric. However, this common feature is previously disclosed by US 7,786,367 B2 (Hansson). Hansson discloses a method for providing music to a group of users (system compiles a music playlist for participants in a group setting; Abstract), comprising: analyzing retrieved songs and associated data to determining songs satisfying a preference metric (playlist accommodates the tastes (preference metric) of various participants based on a super profile that constitutes a compilation of the various participant profiles; Abstract); and streaming the songs which satisfy the performance metric (participants may access the super profile and search among a playlist of songs similar to the songs represented in the super profile, and stream the media; Abstract, and column 4, lines 23-27).

Since the common technical feature is previously disclosed by the Hansson reference, this common feature is not special and so Groups I, II and III lack unity.