(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
5 December 2013 (05.12.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/181046 A3

(51) International Patent Classification:
G06F 15/173 (2006.01) *H04B 3/46* (2006.01)

(21) International Application Number:
PCT/US2013/042303

(22) International Filing Date:
22 May 2013 (22.05.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/483,794 30 May 2012 (30.05.2012) US

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(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).

Published:

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

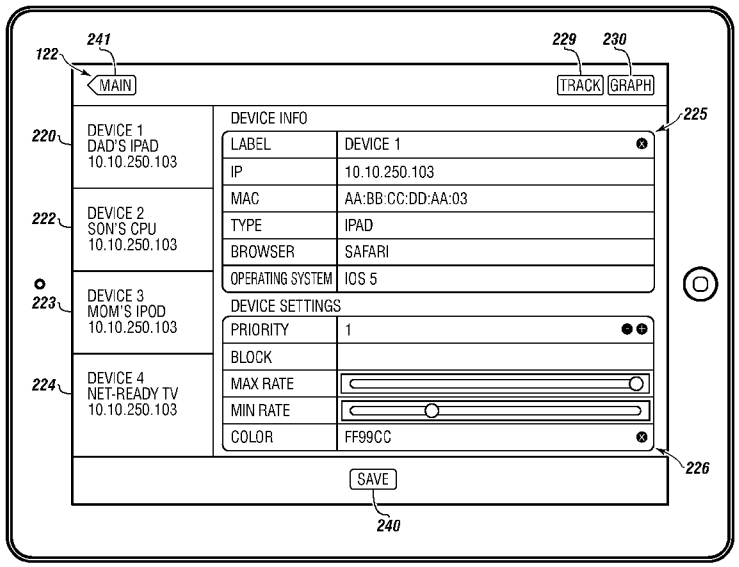
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

[Continued on next page]

(54) **Title**: MONITORING AND CONTROLLING LAN DATA TRANSFER RATES

(57) **Abstract**: A router configured to monitor data transfer to devices on a local area network can include computer instructions for identifying the devices on the local area network, monitoring the data transfer rates for each of the devices, controlling the data transfer rates for each of the devices, and for communicating with a personal device. The personal device can be configured to display the monitored data transfer rates to a user and allow the user to control the data transfer rates for each device.

FIGURE 4



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(88) Date of publication of the international search report:
20 March 2014

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/42303

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 15/173; H04B 3/46 (2014.01)
USPC - 709/224; 375/225
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) Classification(s): G06F 15/173; H04L 12/26; H04B 3/46 (2014.01)
USPC Classification(s): 709/224, 225; 370/232; 375/225

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); ProQuest; IEEE/IEEEXplore; Google/Google Scholar; IP.com; Search Terms Used: home, local, premise, gateway, router, network, discover, detect, capture, IP, MAC, address, host, flow, speed, rate, traffic, quality of service, QoS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0280156 A1 (JING, X et al.) November 17, 2011; figure 1; paragraphs [0021], [0022], [0026], [0028], [0030], [0031], [0035], [0039], [0041], [0061]	1-8
Y	US 2010/0074267 A1 (LADD, P) March 25, 2010; paragraphs [0022], [0040], [0055], [0093], [0070], [0073], [0080], [0095]	1-8
A	US 2012/0131211 A1 (SCHEMITSCH, R) May 24, 2012; entire document	1-8
A	US 2010/0228605 A1 (SAVOOR, R et al.) September 9, 2010; entire document	1-8

☐ 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	Date of mailing of the international search report
3 January 2014 (03.01.2014)	29 JAN 2014
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

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/42303

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 and 10

-***-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.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/42303

-***-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 router configured to monitor the network traffic on a home network.

Group II: Claims 9 and 10 are directed toward a personal device configured to communicate with a router.

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:

The special technical features of Group I include capturing an IP address and a MAC address for a device on the network; extracting a host name associated with the device; monitoring incoming data rates to the device; monitoring outgoing data rates for the device; and computer instructions for speaking with a personal device having a software package thereon, which are not present in Group II.

The special technical features of Group II include traversing a network address translation on which the local area network is connected to the Internet including cell networks; programming and receipt of an event on the router; graphically display real-time and historical data rates of the device; and displaying a list of web addresses requested from the device, which are not present in Group I.

The common technical feature shared by Groups I and II is monitoring and controlling rates for a device on a local area network; and applying a QoS.

However, this common feature is previously disclosed by US 2010/0091747 A1 (Dorsey). Dorsey discloses monitoring and controlling rates for a device on a local area network (GUI-based user control of data rate tradeoff on a WLAN; Abstract, paragraphs [0078] and [0183]); and applying a QoS (base station contros QoS parameters; paragraph [0180]).

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