

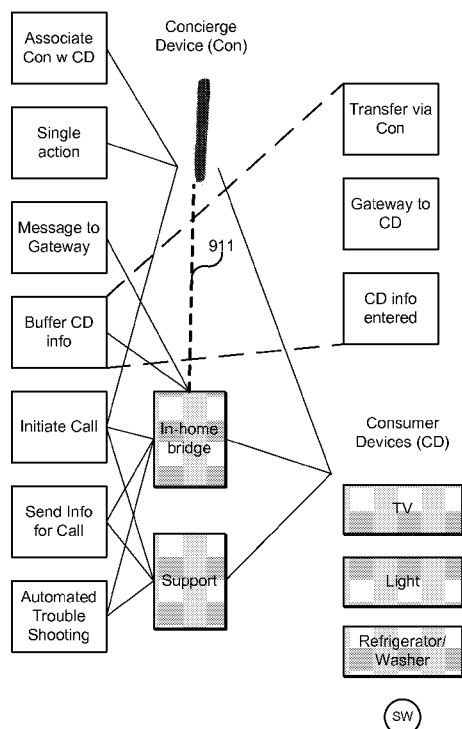


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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, 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, 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.
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[Continued on next page]

(54) Title: CONSUMER ELECTRONIC REGISTRATION, CONTROL AND SUPPORT CONCIERGE DEVICE AND METHOD

FIG. 9



(57) Abstract: We disclose a concierge device that can be configured to register, control and support a consumer device. It can alternatively or redundantly connect to a home management bridge and/or cloud-based management servers. It can accept menus that allow a single concierge device to provide a wide range of functions for various consumer devices. The concierge device allows the user in a single action to initiate a support session, automatically identifying the consumer device. The concierge device can be configured for voice or video support calls. The concierge device in conjunction with a home management bridge or gateway can manage on boarding of components of an automated home, such as switches and lamps. Implementations of the concierge device that include a display can show supplemental information, such as advertising, optionally in coordination with media being played on a consumer device coupled in communication with the concierge device.



GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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).

— *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))*

— *the filing date of the international application is within two months from the date of expiration of the priority period (Rule 26bis.3)*

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

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

30 August 2012

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/020363

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H04L 29/08 (2012.01)

USPC - 702/188

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) - G06F 13/00, 15/00, 15/17, 17/40; G06Q 10/06; H04L 12/00, 12/24, 12/66, 29/06, 29/08, 29/10 (2012.01)

USPC - 702/184, 188; 705/79; 709/204, 207, 224, 231, 250

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, Orbit.com, Google Patents, ProQuest

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category*    | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No.                                                                                                                                                                                                                     |
|--------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X<br>--<br>Y | US 2009/0083000 A1 (SHERMAN et al) 26 March 2009 (26.03.2009) entire document      | 41, 42, 45/41, 45/42,<br>46/45/41, 46/45/42,<br>47/45/41, 47/45/42, 60,<br>61, 64/60, 64/61, 65/60,<br>65/61<br>-----<br>43, 44, 45/43, 45/44,<br>46/45/43, 46/45/44,<br>47/45/43, 47/45/44, 62,<br>63, 64/62, 64/63, 65/62,<br>65/63, 66 |
| X<br>--<br>Y | US 2006/0208889 A1 (SHAFFER et al) 21 September 2006 (21.09.2006) entire document  | 69<br>--<br>1-40, 48-59, 67-68,<br>70-71, 152-197                                                                                                                                                                                         |

☒ 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

16 May 2012

Date of mailing of the international search report

29 JUN 2012

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## INTERNATIONAL SEARCH REPORT

International application No.

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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.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| X<br>—<br>Y | US 2010/0262467 A1 (BARNHILL, JR. et al) 14 October 2010 (14.10.2010) entire document                                                | 72-79, 83/(72-79),<br>84/(72-79), 85/(72-79),<br>86/(72-79), 88/(72-79),<br>89/88/(72-79), 91-98,<br>102/(91-98), 102/(91-98),<br>103/(91-98), 104/(91-98),<br>105/(91-98), 107-108,<br>110-119, 121, 123-132,<br>134-151<br>1-30, 48-49, 67-68,<br>70-71, 80-82, 83/(80-82),<br>84/(80-82), 85/(80-82),<br>86/80-82), 87,<br>88/(80-82), 89/88/(80-82),<br>90, 99-101, 102/(99-101),<br>103/(99-101),<br>104/(99-101),<br>105/(99-101), 106, 109,<br>120, 122, 133, 171-197 |
| Y           | US 2002/0095269 A1 (NATALINI et al) 18 July 2002 (18.07.2002) entire document                                                        | 31-40, 50-59, 152-170                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Y           | US 7,467,186 B2 (ATTAR et al) 16 December 2008 (16.12.2008) entire document                                                          | 15, 29, 30, 43, 44, 45/43,<br>45/44, 46/45/43,<br>46/45/44, 47/45/43,<br>47/45/44, 62, 63, 64/62,<br>64/63, 65/62, 65/63, 66,<br>176, 177, 180-183,<br>190-191, 194-197                                                                                                                                                                                                                                                                                                      |
| Y           | WO 2007/041284 A2 (KRZYZANOWSKI et al) 12 April 2007 (12.04.2007) entire document                                                    | 80-82, 83/(80-82),<br>84/(80-82), 85/(80-82),<br>86/80-82), 87, 88/(80-82),<br>89/88/(80-82),<br>90, 99-101, 102/(99-101),<br>103/(99-101),<br>104/(99-101),<br>105/(99-101), 106, 109,<br>120, 122, 133                                                                                                                                                                                                                                                                     |
| Y           | US 2008/0263621 A1 (AUSTERLITZ et al) 23 October 2008 (23.10.2008) entire document                                                   | 179, 182, 193, 196                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| A           | US 7,526,539 B1 (HSU) 28 April 2009 (28.04.2009) abstract; figures 1, 8, 9; col. 4, line 65 to col. 5, line 41; col. 10, lines 6-51. | 1-197                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| A           | US 2003/0100293 A1 (HUNT) 29 May 2003 (29.05.2003) paragraphs [0021], [0038], [0039].                                                | 1-197                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/020363

## 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:

See extra sheet.

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.:  
1-197
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.:

### 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/US2012/020363

Continuation of Box III.

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 fees must be paid.

Group I, claims 1-30, 48-49, 67-71, 171-183, drawn to a method, concierge device, and consumer appliance integrated with a concierge device comprising: causing a home gateway to: buffer consumer device information for a selected consumer device and determine a support center for a support session, initiate the support session and forward consumer device identification information during the support session, thereby allowing the support session either to bypass an automated attendant or interactive voice recognition system or initiate an automated support protocol.

Group II, claims 31-40, 50-59, 152-170, 184-197, drawn to a concierge device comprising automatically transmitting identification information of a consumer device to a service center; the service center using the unique identification information to determine whether to engage an automated support protocol based on the particular consumer device to be supported.

Group III, claims 41-47, 60-66, drawn to a concierge device comprising initiating at least one voice contact with a service center and conducting a support call with the service center regarding a particular consumer device using the concierge device to capture the user's voice and reproduce audio for the user to hear.

Group IV, claims 72-109, 135-145, drawn to a method of on boarding to a home management bridge, and a home management bridge comprising both a control device and a controlled device, and a concierge device, the method including: receiving a first enrollment signal from the first home control device that uniquely identifies the first home control device; automatically determining the control capabilities of the first home control device and enrolling the first home control device with the management bridge; receiving a second enrollment signal from the second controllable device that uniquely identifies the second controllable device and enrolling the second controllable device with the management bridge; and receiving a dedication signal responsive to a user interface and automatically configuring a combination of the management bridge, the first home control device and the second controlled device so that at least some control signals generated by the first home control device are dedicated to controlling the second controllable device.

Group V, claims 110-134, 146-151, drawn to a method and device including: configuring a connection between a registered unit to a previously registered complementary unit to establish a unit pair, wherein the connection causes a controllable unit of the unit pair to be controlled responsive to control signals sent by a control unit of the unit pair.

Group VI, claims 198-203, drawn to a method of delivering information to a consumer, including pairing a concierge device with a consumer electronic via a two way wireless RF connection, the concierge device receiving a data stream from the consumer electronic device and displaying the information from the data stream on a display integral to the control device.

The inventions listed as Groups I, II, III, IV, V and VI 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 feature of the Group I invention: causing a home gateway to: buffer consumer device information for a selected consumer device and determine a support center for a support session, initiate the support session and forward consumer device identification information during the support session, thereby allowing the support session either to bypass an automated attendant or interactive voice recognition system or initiate an automated support protocol as claimed therein is not present in the invention of Groups II, III, IV, V or VI. The special technical feature of the Group II invention: the service center using the unique identification information to determine whether to engage an automated support protocol based on the particular consumer device to be supported as claimed therein is not present in the invention of Groups I, III, IV, V or VI. The special technical feature of the Group III invention: conducting a support call with the service center regarding a particular consumer device using the concierge device to capture the user's voice and reproduce audio for the user to hear as claimed therein is not present in the invention of Groups I, II, IV, V or VI. The special technical feature of the Group IV invention: a method of on boarding to a home management bridge, and a home management bridge comprising both a control device and a controlled device, and a concierge device, the method including: receiving a first enrollment signal from the first home control device that uniquely identifies the first home control device; automatically determining the control capabilities of the first home control device and enrolling the first home control device with the management bridge; receiving a second enrollment signal from the second controllable device that uniquely identifies the second controllable device and enrolling the second controllable device with the management bridge; and receiving a dedication signal responsive to a user interface and automatically configuring a combination of the management bridge, the first home control device and the second controlled device so that at least some control signals generated by the first home control device are dedicated to controlling the second controllable device as claimed therein is not present in the invention of Groups I, II, III, V or VI. The special technical feature of the Group V invention: configuring a connection between a registered unit to a previously registered complementary unit to establish a unit pair, wherein the connection causes a controllable unit of the unit pair to be controlled responsive to control signals sent by a control unit of the unit pair as claimed therein is not present in the invention of Groups I, II, III, IV or VI. The special technical feature of the Group VI invention: the concierge device receiving a data stream from the consumer electronic device and displaying the information from the data stream on a display integral to the control device as claimed therein is not present in the invention of Groups I, II, III, IV or V.

Groups I, II, III, IV, V and VI lack unity of invention because even though the inventions of these groups require the technical feature of a concierge device which enables identification, registering, and communication among a plurality of consumer electronic devices in a home network, pairing of the concierge device to consumer devices, this technical feature is not a special technical feature as it does not make a contribution over the prior art in view of US 7,526,539 B1 (HSU) 28 April 2009 (28.04.2009) abstract; figures 1, 8, 9; col. 4, line 65 to col. 5, line 41; col. 10, lines 6-51.

Groups I, II, and III lack unity of invention because even though the inventions of these groups require the technical feature of a concierge device which forwards identification information of a consumer device to a support center, this technical feature is not a special technical feature as it does not make a contribution over the prior art in view of US 2003/0100293 A1 (HUNT) 29 May 2003 (29.05.2003) paragraphs [0021], [0038], [0039].

Since none of the special technical features of the Group I, II, III, IV, V or VI inventions are found in more than one of the inventions, unity of invention is lacking.