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| APPLICATION NO. | ISSUE DATE | PATENT NO. | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 15/657,163 | 09/21/2021 | 11128710 | BINDER-014-US3 | 1088 |

131926 7590 09/01/2021

May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

# ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

May Patents Ltd., Hod Hasharon, ISRAEL;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

## PART B – FEE(S) TRANSMITTAL

Complete and send this form, together with the applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By fax, send to: (571) 273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate " FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

May Patents Ltd.
c/o Dorit Shem-Tov
P.O.B. 7230
Ramat-Gan 5217102,
Israel

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

| |
|---|
| (Typed or printed name) |
| (Signature) |
| (Date) |

| APPLICATION NO | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO | CONFIRMATION NO |
|---|---|---|---|---|
| 15/657,163 | 07/23/2017 | Yehuda BINDER | BINDER-014-US3 | 1088 |

TITLE OF INVENTION:

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | SMALL | $600 | $0 | $0 | $600 | 11/09/2021 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| | | |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363)

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1. May Patents Ltd. c/o Dorit Shem-Tov
2.
3.

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: May Patents Ltd.

(B) RESIDENCE: (CITY and STATE or COUNTRY): HOD-HASHARON, ISRAEL 45103

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☑ Corporation or other private group entity ☐ Government

4a. Fees Submitted: ☑ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment (*Please first reapply any previously paid fee shown above*):

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 506726

5. Change of Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29. NOTE: Absent a valid Certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

☐ Applicant asserting small entity status. See 37 CFR 1.27. NOTE: If the application was previously under micro entity status, checking this box will be taken as a notification of loss of entitlement to micro entity status.

☐ Applicant changing to regular undiscounted fee status. NOTE: Checking this box will be taken as a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Yehuda Binder/ Date August 15, 2021

Typed or printed name Yehuda BINDER Registration No. 73,612

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 15657163 |
| **Filing Date:** | 23-Jul-2017 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |

Filed as Small Entity

**Filing Fees for Utility under 35 USC 111(a)**

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| UTILITY APPL ISSUE FEE | 2501 | 1 | 600 | 600 |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Extension-of-Time:** | | | | |
| **Miscellaneous:** | | | | |
| | | | **Total in USD ($)** | **600** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 43512381 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 15-AUG-2021 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 07:47:58 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | DA |
| Payment was successfully received in RAM | $600 |
| RAM confirmation Number | E20218E848302367 |
| Deposit Account | |
| Authorized User | |
| The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: | |

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Issue Fee Payment (PTO-85B) | ptol85b.pdf | 272889<br>9504a253d9ec4e5a6e0ac5bc38cf108ebc0f4e5b | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Fee Worksheet (SB06) | fee-info.pdf | 37548<br>9a5fd75195dff275d648991b3a6433184b4e8d1d | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 310437 | | |

**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

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www.uspto.gov

# NOTICE OF ALLOWANCE AND FEE(S) DUE

131926 7590 08/09/2021

May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

| EXAMINER |
|---|
| KHAN, HASSAN ABDUR-RAHMAN |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2456 | |

DATE MAILED: 08/09/2021

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 15/657,163 | 07/23/2017 | Yehuda BINDER | BINDER-014-US3 | 1088 |

TITLE OF INVENTION: SYSTEM AND METHOD FOR SERVER-BASED CONTROL

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | SMALL | $600 | $0.00 | $0.00 | $600 | 11/09/2021 |

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

**HOW TO REPLY TO THIS NOTICE:**

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.**

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

131926 7590 08/09/2021
May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

| (Typed or printed name) |
|---|
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 15/657,163 | 07/23/2017 | Yehuda BINDER | BINDER-014-US3 | 1088 |

TITLE OF INVENTION: SYSTEM AND METHOD FOR SERVER-BASED CONTROL

| APPLN. TYPE | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|---|---|---|---|---|---|---|
| nonprovisional | SMALL | $600 | $0.00 | $0.00 | $600 | 11/09/2021 |

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|---|---|---|
| KHAN, HASSAN ABDUR-RAHMAN | 2456 | 709-218000 |

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1_____
2_____
3_____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑Issue Fee ❑Publication Fee (if required) ❑Advance Order - # of Copies _____

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
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Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

| EXAMINER | |
|---|---|
| KHAN, HASSAN ABDUR-RAHMAN | |
| **ART UNIT** | **PAPER NUMBER** |
| 2456 | |

DATE MAILED: 08/09/2021

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.



PTOL-85 (Rev. 02/11)

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

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The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

| Notice of Allowability | Application No. 15/657,163 | Applicant(s) BINDER et al. | |
|---|---|---|---|
| | Examiner HASSAN A KHAN | Art Unit 2456 | AIA (FITF) Status No |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--*

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 07/18/2021.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 1 and 3-30 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   **Certified copies:**

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☑ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 07/18/2021.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | /PHILIP J CHEA/<br>Supervisory Patent Examiner, Art Unit 2456 |
|---|---|

**DETAILED ACTION**

**REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance: The claim limitations presented today, together when taken as a whole and claimed, are found to be novel and not obvious. Claims 1 and 3 – 30 are allowed.

The closest prior art of record, Beliles et al. (U.S. Patent Publication No. 2007/0283005), Buck et al. (U.S. Patent Publication No. 2009/0089065) and Abe (U.S. Patent Publication No. 2012/0253480) and none of the prior art of record discloses or suggests, alone or in combination, a method for operating multiple actuators in response to captured human voice data, for use with a client device and a controlled device in a building, each communicating over a wireless network, and for use with an Internet-connected server device external to the building, the method comprising: capturing, by a microphone in the client device, a first human voice data; sending to the server, by the client device via the wireless network, the captured first human voice data; receiving, by the server over the Internet, the captured first human voice data; processing, by the server, the captured first human voice data; responsive to the processing, sending a first message, by the server to the client device over the Internet; receiving, by the client device via the wireless network, the first message; operating a first actuator in the client device in response to the received first message; capturing, by the microphone in the client device, a second human voice data; sending to the server, by the client device via the wireless network, the captured second human voice data; receiving, by the server over the Internet, the captured second human voice data; processing, by the server, the captured second human voice data; responsive to the processing, sending a second message, by the server to the controlled device over the Internet; receiving, by the controlled device via the wireless network, the second message; and operating a second actuator in the controlled device in response to the received second message. Therefore, the claimed subject matter disclosed in the independent claim(s) as a whole is/are not taught or suggested by the prior art of the record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Claim Rejections - 35 USC § 103***

Applicant's arguments and amendments, filed on 07/18/2021 with respect to Claims 1 and 3 – 30 have been fully considered and they are persuasive. Hence the 35 USC § 103 rejection is withdrawn.

**CONCLUSION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HASSAN KHAN whose telephone number is (313) 446-6574. The examiner can normally be reached on MONDAY - THURSDAY: 8AM-6PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Chea can be reached on (571) 272-3951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 - If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. A. K./
Examiner, Art Unit 2456
/PHILIP J CHEA/
Supervisory Patent Examiner, Art Unit 2456

| Notice of References Cited | Application/Control No. 15/657,163 | Applicant(s)/Patent Under Reexamination BINDER et al. | |
|---|---|---|---|
| | Examiner HASSAN A KHAN | Art Unit 2456 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | CPC Classification | US Classification |
|---|---|---|---|---|---|---|
| * | A | US-20160062330-A1 | 03-2016 | Abe; Yuuichi | G05B15/02 | 700/12 |
| * | B | US-20070283005-A1 | 12-2007 | Beliles; Robert P. | H04L41/0816 | 709/224 |
| * | C | US-20090089065-A1 | 04-2009 | Buck; Markus | G10L15/26 | 704/275 |
| * | D | US-20150138333-A1 | 05-2015 | DeVaul; Richard Wayne | G06F3/167 | 348/78 |
| * | E | US-20100305807-A1 | 12-2010 | Basir; Otman A. | G07C5/0833 | 701/31.4 |
| * | F | US-20070038461-A1 | 02-2007 | Abbott; Lisa | G10L15/30 | 704/275 |
| * | G | US-20080215336-A1 | 09-2008 | Oesterling; Christopher L. | G10L15/26 | 704/275 |
| | H | | | | | |
| | I | | | | | |
| | J | | | | | |
| | K | | | | | |
| | L | | | | | |
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**FOREIGN PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | CPC Classification |
|---|---|---|---|---|---|---|
| | N | | | | | |
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| | R | | | | | |
| | S | | | | | |
| | T | | | | | |

**NON-PATENT DOCUMENTS**

| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
| | U | |
| | V | |
| | W | |
| | X | |

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | **Examiner** | **Art Unit** |
| | HASSAN A KHAN | 2456 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ✓ | Rejected | - | Cancelled | N | Non-Elected | A | Appeal |
| = | Allowed | ÷ | Restricted | I | Interference | O | Objected |

**CLAIMS**

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 09/29/2017 | 01/19/2018 | 06/18/2018 | 08/30/2018 | 12/28/2018 | 12/18/2020 | 01/29/2021 | 07/31/2021 | |
| 1 | 1 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| | 2 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | - | |
| 2 | 3 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 3 | 4 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 4 | 5 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 5 | 6 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 6 | 7 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 7 | 8 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 8 | 9 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 9 | 10 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 10 | 11 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 11 | 12 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 12 | 13 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 13 | 14 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 14 | 15 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 15 | 16 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 16 | 17 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 17 | 18 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 18 | 19 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 19 | 20 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 20 | 21 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 21 | 22 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 22 | 23 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 23 | 24 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 24 | 25 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 25 | 26 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 26 | 27 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 27 | 28 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 28 | 29 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |
| 29 | 30 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | = | |

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | **Examiner** | **Art Unit** |
| | HASSAN A KHAN | 2456 |

| CPC - Searched* | | |
|---|---|---|
| **Symbol** | **Date** | **Examiner** |
| H04L67/12, B60K 31/00, B60K 31/18, B60Y2200/11, B60Y2200/12, B60Y2200/126, B60Y2200/13, B60Y2200/30, B60Y2200/40, B60Y2200/50, B60Y2200/90, G01C 21/00, G06Q2240/00, G07C 5/008, G08G 1/00 | 9/29/2017 | H.K. |

| CPC Combination Sets - Searched* | | |
|---|---|---|
| **Symbol** | **Date** | **Examiner** |
| | | |

| US Classification - Searched* | | | |
|---|---|---|---|
| **Class** | **Subclass** | **Date** | **Examiner** |
| | | | |

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

| Search Notes | | |
|---|---|---|
| **Search Notes** | **Date** | **Examiner** |
| Assignee search conducted (see EAST search history) | 9/29/2017 | H.K. |
| Google Patents search conducted | 9/29/2017 | H.K. |
| Inventor search conducted (see EAST search history) | 9/29/2017 | H.K. |
| EAST Search History (see attached) | 9/29/2017 | H.K. |
| Assignee search conducted (see EAST search history) | 01/19/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 01/19/2018 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 01/19/2018 | H.K. |
| Assignee search conducted (see EAST search history) | 6/18/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 6/18/2018 | H.K. |

| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | |
|---|---|

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
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| | 15/657,163 | BINDER et al. |
| | Examiner | Art Unit |
| | HASSAN A KHAN | 2456 |

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|---|---|---|
| Updated EAST Search History further limited by text search (see attached) | 6/18/2018 | H.K. |
| Assignee search conducted (see EAST search history) | 08/30/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 08/30/2018 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 08/30/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 12/18/2020 | H.K. |
| Assignee search conducted (see EAST search history) | 12/18/2020 | H.K. |
| Google Patents search conducted (cursory review) | 12/18/2020 | H.K. |
| NPL IP.com search conducted (cursory review) | 12/18/2020 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 12/18/2020 | H.K. |
| Inventor search conducted (see EAST search history) | 01/29/2021 | H.K. |
| Assignee search conducted (see EAST search history) | 01/29/2021 | H.K. |
| Google Patents search conducted (cursory review) | 01/29/2021 | H.K. |
| NPL IP.com search conducted (cursory review) | 01/29/2021 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 01/29/2021 | H.K. |
| Inventor search conducted (see EAST search history) | 07/31/2021 | H.K. |
| Assignee search conducted (see EAST search history) | 07/31/2021 | H.K. |
| Google Patents search conducted (cursory review) | 07/31/2021 | H.K. |
| NPL IP.com search conducted (cursory review) | 07/31/2021 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 07/31/2021 | H.K. |

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| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | |

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | **Examiner** | **Art Unit** |
| | HASSAN A KHAN | 2456 |

| Interference Search | | | |
|---|---|---|---|
| **US Class/CPC Symbol** | **US Subclass/CPC Group** | **Date** | **Examiner** |
| H04L | 67/12 | 07/31/2021 | H.K. |
| B60K | 31/00, 31/18 | 07/31/2021 | H.K. |
| B60Y | 2200/11, 2200/12, 2200/126, 2200/13, 2200/30, 2200/40, 2200/50, 2200/90 | 07/31/2021 | H.K. |
| G06Q | 2240/00 | 07/31/2021 | H.K. |
| G01C | 21/00 | 07/31/2021 | H.K. |
| G07C | 5/008 | 07/31/2021 | H.K. |
| G08G | 1/00 | 07/31/2021 | H.K. |

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| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | |

| Issue Classification | Application/Control No. | Applicant(s)/Patent Under Reexamination |
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| | 15/657,163 | BINDER et al. |
| | **Examiner** | **Art Unit** |
| | HASSAN A KHAN | 2456 |

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| **Symbol** | | | | | **Type** | **Version** |
| H04L | / | 67 | / | 12 | F | 2013-01-01 |
| Y04S | / | 40 | / | 18 | A | 2018-05-01 |
| B60K | / | 31 | / | 00 | A | 2013-01-01 |
| B60K | / | 31 | / | 18 | A | 2013-01-01 |
| B60Y | / | 2200 | / | 11 | A | 2013-01-01 |
| B60Y | / | 2200 | / | 12 | A | 2013-01-01 |
| B60Y | / | 2200 | / | 126 | A | 2013-01-01 |
| B60Y | / | 2200 | / | 13 | A | 2013-01-01 |
| B60Y | / | 2200 | / | 30 | A | 2013-01-01 |
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| B60Y | / | 2200 | / | 50 | A | 2013-01-01 |
| B60Y | / | 2200 | / | 90 | A | 2013-01-01 |
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| G06Q | / | 2240 | / | 00 | A | 2013-01-01 |
| G07C | / | 5 | / | 008 | A | 2013-01-01 |
| G08G | / | 1 | / | 00 | A | 2013-01-01 |

| CPC Combination Sets | | | | | | | |
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| **Symbol** | | | | | **Type** | **Set** | **Ranking** | **Version** |
| | / | | / | | | | | |

| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | 31 July 2021 | **Total Claims Allowed:** | |
|---|---|---|---|
| (Assistant Examiner) | (Date) | 29 | |
| /PHILIP J CHEA/<br>Supervisory Patent Examiner, Art Unit 2456 | 03 August 2021 | O.G. Print Claim(s) | O.G. Print Figure |
| (Primary Examiner) | (Date) | 1 | 5i |

U.S. Patent and Trademark Office — Part of Paper No.: 20210731



Amazon EX1004 Page 20

| Issue Classification | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | **Examiner** | **Art Unit** |
| | HASSAN A KHAN | 2456 |

| INTERNATIONAL CLASSIFICATION | | | | |
|---|---|---|---|---|
| **CLAIMED** | | | | |
| H04L | / | 29 | / | 08 |
| B60K | / | 31 | / | 00 |
| G01C | / | 21 | / | 00 |
| G07C | / | 5 | / | 00 |
| G08G | / | 1 | / | 00 |

| NON-CLAIMED | | | | |
|---|---|---|---|---|
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| US ORIGINAL CLASSIFICATION | |
|---|---|
| **CLASS** | **SUBCLASS** |
| | |

| CROSS REFERENCES(S) | | | | | | |
|---|---|---|---|---|---|---|
| **CLASS** | **SUBCLASS (ONE SUBCLASS PER BLOCK)** | | | | | |
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|---|---|---|---|
| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | 31 July 2021 | **Total Claims Allowed:** | |
| (Assistant Examiner) | (Date) | 29 | |
| /PHILIP J CHEA/<br>Supervisory Patent Examiner, Art Unit 2456 | 03 August 2021 | O.G. Print Claim(s) | O.G. Print Figure |
| (Primary Examiner) | (Date) | 1 | 5i |

U.S. Patent and Trademark Office — Part of Paper No.: 20210731



Amazon EX1004 Page 21

| Issue Classification | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | **Examiner** | **Art Unit** |
| | HASSAN A KHAN | 2456 |

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

**CLAIMS**

| Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original | Final | Original |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 9 | 10 | 18 | 19 | 27 | 28 | | | | | | | | |
| | 2 | 10 | 11 | 19 | 20 | 28 | 29 | | | | | | | | |
| 2 | 3 | 11 | 12 | 20 | 21 | 29 | 30 | | | | | | | | |
| 3 | 4 | 12 | 13 | 21 | 22 | | | | | | | | | | |
| 4 | 5 | 13 | 14 | 22 | 23 | | | | | | | | | | |
| 5 | 6 | 14 | 15 | 23 | 24 | | | | | | | | | | |
| 6 | 7 | 15 | 16 | 24 | 25 | | | | | | | | | | |
| 7 | 8 | 16 | 17 | 25 | 26 | | | | | | | | | | |
| 8 | 9 | 17 | 18 | 26 | 27 | | | | | | | | | | |

| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | 31 July 2021 | **Total Claims Allowed:** | |
|---|---|---|---|
| (Assistant Examiner) | (Date) | 29 | |
| /PHILIP J CHEA/<br>Supervisory Patent Examiner, Art Unit 2456 | 03 August 2021 | O.G. Print Claim(s) | O.G. Print Figure |
| (Primary Examiner) | (Date) | 1 | 5i |

U.S. Patent and Trademark Office — Part of Paper No.: 20210731



Amazon EX1004 Page 22

## Bibliographic Data

Application No: 15/657,163

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: Examiner's Signature | Initials

Title: SYSTEM AND METHOD FOR SERVER-BASED CONTROL

| FILING or 371(c) DATE | CLASS | GROUP ART UNIT | ATTORNEY DOCKET NO. |
|---|---|---|---|
| 07/23/2017 | 709 | 2456 | BINDER-014-US3 |
| RULE | | | |

**APPLICANTS**

May Patents Ltd., Hod Hasharon, ISRAEL

**INVENTORS**

Yehuda BINDER, Ramat Gan, ISRAEL

Benjamin MAYTAL, Mevasseret Zion, ISRAEL

**CONTINUING DATA**

This application is a CON of 13733634 01/03/2013

13733634 has PRO of 61647034 05/15/2012

13733634 has PRO of 61637030 04/23/2012

13733634 has PRO of 61620129 04/04/2012

13733634 has PRO of 61584500 01/09/2012

**FOREIGN APPLICATIONS**

**IF REQUIRED, FOREIGN LICENSE GRANTED****

08/03/2017

**** SMALL ENTITY ****

**STATE OR COUNTRY**

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ISRAEL

**FILING FEE RECEIVED**

$3,800

# Web Search History

| date, time | web site | search string |
|---|---|---|
| 7/31/2021 3:26:44 PM | Google Patents | Keyword Group 1<br>[capturing voice or speech to control actuator and sensor] |
| 7/31/2021 3:26:59 PM | Google Patents | Keyword Group 1<br>[first device sensor second device actuator voice or speech recognition] |
| 7/31/2021 3:27:17 PM | Google Patents | Keyword Group 1<br>[internet connected server external network sensor network and actuators] |
| 7/31/2021 3:27:43 PM | Google Patents | Keyword Group 1<br>[voice controlled actuators based on sensor data centralized remote server] |
| 7/31/2021 3:28:04 PM | Google Patents | Keyword Group 1<br>[smart devices voice recognition and external remote server] |
| 7/31/2021 3:28:12 PM | Google Patents | Keyword Group 1<br>[appliances voice recognition and external remote server] |
| 7/31/2021 3:28:45 PM | Google Patents | Keyword Group 1<br>[appliances voice recognition and external remote server first and second client and controlled devices] |
| 7/31/2021 3:29:09 PM | Google Patents | Keyword Group 1<br>[appliances voice recognition that controls appliances actuators and sensors] |
| 7/31/2021 3:29:15 PM | Google Patents | Keyword Group 1<br>[appliances voice recognition that controls appliances] |

**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L5 | 1 | "20010025349" | US-PGPUB; USPAT | OR | ON | 2021/07/31 12:23 |
| L6 | 5,774 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L7 | 30,555 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L8 | 50,945 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L9 | 50,945 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L10 | 384 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L11 | 1,317 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L12 | 322 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L13 | 555 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L14 | 144 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L15 | 206 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L16 | 121 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L17 | 173 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L18 | 64,683 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L19 | 781 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L20 | 26,923 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L21 | 98,885 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L22 | 38,387 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L23 | 79 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |

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|---|---|---|---|---|---|---|
| L24 | 136 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L25 | 496 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L26 | 57 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L27 | 30,555 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L28 | 21,643 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L29 | 57 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L30 | 496 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L31 | 136 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L32 | 79 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L33 | 274,863 | L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L30 L31 L32 | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:16 |
| L34 | 1 | L33 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2021/07/31 14:16 |
| S1 | 1 | "13733634" | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:33 |
| S2 | 7,358 | (actuator with sensor with network) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:34 |
| S3 | 161 | (actuator with sensor with network with router) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:34 |
| S4 | 14 | (actuator with sensor with network with router with (car or vehicle)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:34 |
| S5 | 1,020 | (actuator with sensor with network with (car or vehicle)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:37 |
| S6 | 535 | S5 and (router or routing) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:38 |
| S7 | 147 | S5 and (NAT or DHCP) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:38 |
| S8 | 54 | S5 and (control adj2 logic) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:39 |
| S9 | 7,358 | (actuator with sensor with network) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:48 |
| S10 | 675 | S9 and (piezoelectric$6 or (piezo$1electric$6)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:49 |

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|---|---|---|---|---|---|---|
| S11 | 120 | S10 and (network with (routing or router)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:49 |
| S12 | 58 | S11 and (vehicle or car) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:49 |
| S13 | 21 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:08 |
| S14 | 21 | S13 and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:08 |
| S15 | 1 | S13 and (actuator same router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:08 |
| S16 | 200 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:11 |
| S17 | 119 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) same network | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:12 |
| S18 | 110 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) same network same sensor | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:12 |
| S19 | 76 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:12 |
| S20 | 68 | (actuator same router same ((vehicle or car or automobile) or (building))) same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:13 |
| S21 | 21 | (actuator same router same ((vehicle or car or automobile) same | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:15 |

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|---|---|---|---|---|---|---|
| | | (building))) same network same (sensor or control) same data | | | | |
| S22 | 21 | actuator same router same (vehicle or car or automobile) same building same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:15 |
| S23 | 47 | S20 XOR S22 | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:17 |
| S24 | 1 | (US-8195844-$).did. | USPAT | ADJ | ON | 2017/02/13 22:36 |
| S25 | 1 | "20090083589" | USPAT | ADJ | ON | 2017/02/13 22:36 |
| S36 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/14 00:34 |
| S37 | 520 | (home with network) same sensor same gateway same network | US-PGPUB | ADJ | ON | 2017/02/14 00:37 |
| S38 | 222 | (home with network) with sensor with gateway | US-PGPUB | ADJ | ON | 2017/02/14 00:37 |
| S39 | 4 | (home with network) with sensor with gateway with command | US-PGPUB | ADJ | ON | 2017/02/14 00:38 |
| S40 | 22 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:23 |
| S41 | 21 | S40 and (vehicle or vehical or automobile or car) | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:29 |
| S42 | 21 | S40 and (vehicle or vehical or automobile or car) and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:29 |
| S43 | 15 | S40 and (vehicle or vehical or automobile or car) and actuator and sensor and network and cellular and wireless | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:30 |

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|---|---|---|---|---|---|---|
| S44 | 15 | S40 and (coupled) | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:35 |
| S45 | 1 | S40 and (router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:36 |
| S46 | 832 | (vehicle or car) with router with (control or server) with network | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:37 |
| S47 | 11 | (vehicle or car) with router with (control or server) with network with actuator | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:37 |
| S48 | 2 | "20090198380" | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:42 |
| S49 | 1 | "20060217840" | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:42 |
| S50 | 7 | (US-20160062330-$ or US-20090198380-$ or US-20060217840-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$).did. | US-PGPUB | ADJ | ON | 2017/02/17 04:34 |
| S51 | 4 | S50 and (actuator with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:34 |
| S52 | 4 | S50 and (actuator) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:36 |
| S53 | 3 | "13404575" | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:38 |
| S54 | 2 | S50 and (sensor with router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:39 |
| S55 | 27 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$).did. or (US-8140658-$ or US-7844687-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:39 |

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|---|---|---|---|---|---|---|
| | | 7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S56 | 3 | S55 and (sensor with router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:39 |
| S57 | 319 | (actuator with sensor with router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:40 |
| S58 | 178 | (actuator NEAR9 sensor NEAr9 router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:40 |
| S59 | 125 | (actuator with sensor with router with (command or signal or transmi$6 or data)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:41 |
| S60 | 7 | (US-20160062330-$ or US-20090198380-$ or US-20060217840-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$).did. | US-PGPUB | ADJ | ON | 2017/02/17 21:05 |
| S61 | 2 | S60 and (router with (building or vehicle or car)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:06 |
| S62 | 2 | S60 and (router with (building or vehicle or car) with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:06 |
| S63 | 524 | (router with (building or vehicle or car) with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:06 |
| S64 | 96 | (router near9 (building or vehicle or car) near5 sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:07 |
| S65 | 28 | (router near9 (building or vehicle or car) near9 sensor near9 network) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:07 |
| S66 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/17 21:11 |
| S67 | 28 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |

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|---|---|---|---|---|---|---|
| | | 20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S68 | 27 | S67 and (control with (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |
| S69 | 22 | S67 and (control NEAR0 (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |
| S70 | 26 | S67 and (control NEAR9 (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |
| S71 | 9 | S67 and (command NEAR9 (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:15 |
| S72 | 2 | (US-20160062330-$ or US-20070283005-$).did. | US-PGPUB | ADJ | ON | 2017/02/20 06:05 |
| S73 | 1 | S72 and ((additional or extra or second or third) with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 06:29 |
| S74 | 28 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 06:30 |
| S75 | 12 | S74 and ((additional or extra or second or third) with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 06:31 |
| S76 | 2 | S72 and ((more) with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 06:32 |

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|---|---|---|---|---|---|---|
| S77 | 5 | S74 and piezoelectric | US-PGPUB | ADJ | ON | 2017/02/20 06:43 |
| S78 | 2 | S72 and (IP or address or internet or protocol) | US-PGPUB | ADJ | ON | 2017/02/20 06:56 |
| S79 | 2 | S74 and (DHCP and (IPv4 or IPv6)) | US-PGPUB | ADJ | ON | 2017/02/20 07:02 |
| S80 | 146 | (control$6 with (sensor or actuator) with network) and (DHCP and (IPv4 or IPv6)) | US-PGPUB | ADJ | ON | 2017/02/20 07:04 |
| S81 | 69 | (control$6 with (sensor or actuator) with network) and (DHCP with (IPv4 or IPv6)) | US-PGPUB | ADJ | ON | 2017/02/20 07:04 |
| S82 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/20 07:12 |
| S83 | 36 | S81 and zigbee | US-PGPUB | ADJ | ON | 2017/02/20 07:21 |
| S84 | 9 | S81 and zigbee and (temperature with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 07:22 |
| S85 | 36 | S81 and zigbee and (sensor) | US-PGPUB | ADJ | ON | 2017/02/20 07:22 |
| S86 | 15 | S81 and zigbee and (temperature) | US-PGPUB | ADJ | ON | 2017/02/20 07:22 |
| S87 | 12 | S81 and zigbee and (temperature) and (DHCP with assign$6) | US-PGPUB | ADJ | ON | 2017/02/20 07:23 |
| S88 | 3 | (US-20120253480-$ or US-20100071053-$ or US-20070283005-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 02:26 |
| S89 | 1 | S88 and (IP with assign$6) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:28 |
| S90 | 3 | S88 and (power) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:34 |
| S91 | 32 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:35 |

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|---|---|---|---|---|---|---|
| | | 20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S92 | 15,493 | (router with power) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:36 |
| S93 | 2 | S91 and (router with power) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:36 |
| S94 | 1,606 | (router with power with (case or box or inside or enclosure or casing)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:36 |
| S95 | 578 | (router NEAR9 power NEAR9 (case or box or inside or enclosure or casing)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:37 |
| S96 | 587 | (router NEAR9 power NEAR9 (housed or enclos$5 or case or box or inside or enclosure or casing)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:37 |
| S97 | 17 | (router NEAR9 power NEAR9 (housed or enclos$5 or case or box or inside or enclosure or casing) NEAR9 (AC or DC)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:37 |
| S98 | 17 | S91 and (light with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 03:05 |
| S99 | 0 | S88 and (light with (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:19 |
| S100 | 5 | S91 and (light with (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:19 |
| S101 | 5 | S91 and (light NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:20 |
| S102 | 128 | ((actuator with light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:22 |

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| S103 | 79 | ((actuator NEAR5 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:23 |
| S104 | 6 | (sensor with (actuator NEAR5 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:23 |
| S105 | 1 | (sensor with (actuator NEAR2 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:25 |
| S106 | 21 | ((actuator NEAR2 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:25 |
| S107 | 1 | S106 and invisible | US-PGPUB | ADJ | ON | 2017/02/21 03:37 |
| S108 | 1 | S106 and (nonvisible or "non-visible" or invisible) | US-PGPUB | ADJ | ON | 2017/02/21 03:38 |
| S109 | 12 | S106 and (LED or SSL or (discharge adj2 lamp) or (flourescent adj2 lamp) or PLED or (laser near5 diode)) | US-PGPUB | ADJ | ON | 2017/02/21 03:50 |
| S110 | 10 | S106 and (diode or SSL or (discharge adj2 lamp) or (flourescent adj2 lamp) or PLED or (laser near5 diode)) | US-PGPUB | ADJ | ON | 2017/02/21 03:50 |
| S111 | 10 | S106 and (diode or (discharge adj2 lamp) or (flourescent adj2 lamp) or PLED or (laser near5 diode)) | US-PGPUB | ADJ | ON | 2017/02/21 03:50 |
| S112 | 4 | ((actuator NEAR2 light NEAR5 (discharge or emit)) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 05:29 |
| S113 | 58 | (actuator NEAR2 light NEAR5 (discharge or emit)) | US-PGPUB | ADJ | ON | 2017/02/21 05:30 |
| S114 | 4 | (actuator NEAR2 light NEAR5 (discharge or emit) NEAR9 visible) | US-PGPUB | ADJ | ON | 2017/02/21 05:30 |
| S115 | 5 | (actuator NEAR2 light NEAR5 (discharge or emit) with sensor) | US-PGPUB | ADJ | ON | 2017/02/21 05:31 |
| S116 | 1,605 | ((Frequency adj3 Division adj3 Multiplexing) or FDM) with power with (communication or signal or transmission) | US-PGPUB | ADJ | ON | 2017/02/21 05:48 |

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| S117 | 1 | ((Frequency adj3 Division adj3 Multiplexing) or FDM) with power with (communication or signal or transmission) with band with splitter | US-PGPUB | ADJ | ON | 2017/02/21 05:48 |
| S118 | 34 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:54 |
| S119 | 13 | S118 and splitter | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:54 |
| S120 | 13 | S118 and splitter and frequency | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:54 |
| S121 | 1 | S118 and (splitter same frequency) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:55 |
| S122 | 234 | (power with data with splitter with frequency) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:56 |
| S123 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 10:03 |
| S124 | 462 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) | US-PGPUB | ADJ | ON | 2017/02/21 10:07 |

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|---|---|---|---|---|---|---|
| S125 | 261 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:08 |
| S126 | 302 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) | US-PGPUB | ADJ | ON | 2017/02/21 10:08 |
| S127 | 273 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:09 |
| S128 | 112 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and transformer and capacitor | US-PGPUB | ADJ | ON | 2017/02/21 10:10 |
| S129 | 88 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and transformer and capacitor and sensor | US-PGPUB | ADJ | ON | 2017/02/21 10:10 |
| S130 | 41 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and transformer and capacitor and sensor and (split or splits or splitter) | US-PGPUB | ADJ | ON | 2017/02/21 10:13 |
| S131 | 31 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or | US-PGPUB | ADJ | ON | 2017/02/21 10:15 |

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|---|---|---|---|---|---|---|
| | | (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and (transformer with capacitor with (windings or wirings or coils)) | | | | |
| S132 | 3 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and (transformer with capacitor with (windings or wirings or coils)) and sensor and (split or splits or splitter) | US-PGPUB | ADJ | ON | 2017/02/21 10:19 |
| S133 | 239 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near3 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:34 |
| S134 | 262 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (modula$4 near5 band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:35 |
| S135 | 45 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 modula$4 near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:35 |
| S136 | 1 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 modula$4 near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate or unique or other or another)) and | US-PGPUB | ADJ | ON | 2017/02/21 10:51 |

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|---|---|---|---|---|---|---|
| | | ((data or communication) near5 (channel or band or frequency)) | | | | |
| S137 | 57 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 11:00 |
| S138 | 0 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate)) and ((data or communication) near5 (channel or band or frequency)) and (split or splitter or divide) and (transformer with capacitor with (windings or coils)) | US-PGPUB | ADJ | ON | 2017/02/21 11:01 |
| S139 | 17 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate)) and ((data or communication) near5 (channel or band or frequency)) and (split or splitter or divide) and (transformer with capacitor) | US-PGPUB | ADJ | ON | 2017/02/21 11:01 |
| S140 | 1 | (US-20130308581-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 11:09 |
| S141 | 1 | (US-20110118888-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 11:28 |
| S142 | 2 | (US-20160062330-$ or US-20070283005-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 11:49 |
| S143 | 0 | S142 and appliance | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 11:49 |
| S144 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 12:06 |
| S145 | 205 | (yehuda and binder).in. | US-PGPUB | ADJ | ON | 2017/02/21 12:24 |
| S146 | 26 | (benjamin and maytal).in. | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |

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| S147 | 26 | (may and patents).as. | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S148 | 25 | (may and patents).aanm. | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S149 | 8 | S147 and S148 | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S150 | 1 | S145 and S146 | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S151 | 43 | S147 or S148 | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S152 | 230 | S145 or S146 | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S153 | 230 | S151 or S152 | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S154 | 17 | S153 and piezoelectric.clm. | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S155 | 1 | S153 and (vehicle and router and actuator).clm. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S156 | 7,130 | H04L67/12.cpc. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S157 | 993 | 348/77.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S158 | 374 | 700/28.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S159 | 148 | 700/22.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:28 |
| S160 | 1,455 | 709/218.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:28 |
| S161 | 2 | "20130080642" | US-PGPUB; USPAT | ADJ | ON | 2017/06/30 12:25 |
| S162 | 1 | "14499166" | US-PGPUB; USPAT | ADJ | ON | 2017/06/30 12:27 |
| S163 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$).did. | US-PGPUB | ADJ | ON | 2017/07/05 10:43 |

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|---|---|---|---|---|---|---|
| S164 | 2 | S163 and (sensor and actuator and router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:43 |
| S165 | 36 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:44 |
| S166 | 3 | S165 and (sensor and actuator and router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:44 |
| S168 | 7 | S165 and (sensor same network same router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:45 |
| S169 | 36 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:20 |

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|---|---|---|---|---|---|---|
| | | 20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S170 | 7 | S169 and (sensor same network same router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:20 |
| S171 | 3 | S170 and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:20 |
| S172 | 24 | S169 and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:21 |
| S173 | 2 | (US-20160062330-$ or US-20070283005-$).did. | US-PGPUB | OR | OFF | 2017/07/19 19:14 |
| S174 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 00:24 |
| S175 | 1 | "20120079149" | US-PGPUB | OR | OFF | 2017/07/20 00:29 |
| S176 | 1 | "20120079149" | US-PGPUB | OR | OFF | 2017/07/20 06:37 |
| S177 | 1 | S176 and ((sensor or actuator) with router) | US-PGPUB | OR | OFF | 2017/07/20 06:37 |
| S178 | 1 | S176 and (router) | US-PGPUB | OR | OFF | 2017/07/20 06:37 |
| S179 | 0 | S176 and (commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:41 |
| S180 | 37 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US- | US-PGPUB; USPAT | OR | OFF | 2017/07/20 06:41 |

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|---|---|---|---|---|---|---|
| | | 20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S181 | 1 | S180 and (commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:41 |
| S182 | 2 | (actuator with commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:42 |
| S183 | 25 | (sensor with commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:42 |
| S184 | 9 | (sensor NEAR9 commands NEAR9 router) | US-PGPUB | OR | OFF | 2017/07/20 06:42 |
| S185 | 3 | S184 and actuator | US-PGPUB | OR | OFF | 2017/07/20 06:54 |
| S186 | 3 | (US-20160062330-$ or US-20100071053-$ or US-20070283005-$).did. | US-PGPUB | OR | OFF | 2017/07/20 09:43 |
| S192 | 3 | (US-20160062330-$ or US-20100071053-$ or US-20070283005-$).did. | US-PGPUB | OR | OFF | 2017/07/20 09:45 |
| S193 | 3 | S192 and address | US-PGPUB | OR | OFF | 2017/07/20 09:45 |
| S194 | 0 | S192 and ((unique or individual or distinct or separate) with address) | US-PGPUB | OR | OFF | 2017/07/20 09:46 |
| S195 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US- | US-PGPUB | OR | OFF | 2017/07/20 12:16 |

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|---|---|---|---|---|---|---|
| | | 20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | | | | |
| S200 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 12:17 |
| S201 | 12 | S200 and power | US-PGPUB | OR | OFF | 2017/07/20 12:17 |
| S202 | 2 | S200 and (power with (socket or port or connector)) | US-PGPUB | OR | OFF | 2017/07/20 12:17 |
| S203 | 3 | S200 and (power with (AC or DC)) | US-PGPUB | OR | OFF | 2017/07/20 12:18 |
| S204 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S205 | 0 | S204 and medical | USPAT | OR | OFF | 2017/07/20 12:23 |
| S206 | 0 | S204 and medicine | USPAT | OR | OFF | 2017/07/20 12:23 |
| S207 | 0 | S204 and power | USPAT | OR | OFF | 2017/07/20 12:23 |
| S208 | 0 | S204 and actuator | USPAT | OR | OFF | 2017/07/20 12:23 |
| S209 | 14 | S200 and sensor | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S210 | 12 | S200 and power | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S212 | 1 | S204 and medical | US-PGPUB | OR | OFF | 2017/07/20 12:23 |

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|---|---|---|---|---|---|---|
| S213 | 5 | S201 and (AC or DC) | US-PGPUB | OR | OFF | 2017/07/20 12:27 |
| S214 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 14:03 |
| S215 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 15:03 |
| S220 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 15:05 |
| S225 | 5 | S220 and battery | US-PGPUB | OR | OFF | 2017/07/20 15:06 |
| S226 | 12 | S220 and network | US-PGPUB | OR | OFF | 2017/07/20 15:06 |
| S227 | 3 | S220 and (data with paths) | US-PGPUB | OR | OFF | 2017/07/20 15:06 |
| S228 | 2 | S220 and (router with port) | US-PGPUB | OR | OFF | 2017/07/20 15:16 |
| S229 | 8 | S220 and (embed or embedded or inside) | US-PGPUB | OR | OFF | 2017/07/20 15:40 |
| S230 | 2 | S220 and ((embed or embedded or inside) with router) | US-PGPUB | OR | OFF | 2017/07/20 15:49 |
| S231 | 5 | S220 and ((embed or embedded or inside) with sensor) | US-PGPUB | OR | OFF | 2017/07/20 15:50 |
| S232 | 5 | S220 and ((embed or embedded or inside or contained) with sensor) | US-PGPUB | OR | OFF | 2017/07/20 15:51 |

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| S233 | 2 | S220 and ((embed or embedded or inside or contained) with router) | US-PGPUB | OR | OFF | 2017/07/20 15:51 |
| S234 | 5 | S220 and ((router or sensor) with integrat$4) | US-PGPUB | OR | OFF | 2017/07/20 15:51 |
| S235 | 12 | S220 and (embedded or embed or integrat$4) | US-PGPUB | OR | OFF | 2017/07/20 15:56 |
| S236 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$).did. | US-PGPUB | OR | OFF | 2017/07/20 19:05 |
| S242 | 13 | S236 and device | US-PGPUB | OR | OFF | 2017/07/20 19:06 |
| S243 | 0 | S236 and (routing with phone) | US-PGPUB | OR | OFF | 2017/07/20 19:08 |
| S244 | 2 | S236 and (router with phone) | US-PGPUB | OR | OFF | 2017/07/20 19:08 |
| S245 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 19:22 |
| S246 | 1 | S245 and actuator | US-PGPUB | OR | OFF | 2017/07/20 19:22 |
| S247 | 1,063 | ISM near2 radio near2 band | US-PGPUB | OR | OFF | 2017/07/20 19:44 |
| S248 | 496 | industrial near3 scientific near3 radio near3 band | US-PGPUB | OR | OFF | 2017/07/20 19:44 |
| S249 | 1 | (industrial near3 scientific near3 radio near3 band) near5 WAN | US-PGPUB | OR | OFF | 2017/07/20 19:45 |
| S250 | 3 | (industrial near3 scientific near3 radio near3 band) with WAN | US-PGPUB | OR | OFF | 2017/07/20 19:46 |
| S251 | 0 | (industrial near3 scientific near3 radio near3 band) near5 internet | US-PGPUB | OR | OFF | 2017/07/20 19:46 |
| S252 | 14 | (industrial near3 scientific near3 radio near3 band) near5 network | US-PGPUB | OR | OFF | 2017/07/20 19:46 |
| S253 | 1 | S236 and (WAN with antenna) | US-PGPUB | OR | OFF | 2017/07/20 19:56 |
| S254 | 1 | S236 and (WAN with modem) | US-PGPUB | OR | OFF | 2017/07/20 19:59 |

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| S255 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 20:19 |
| S256 | 157 | (BINDER and Yehuda).in. | USPAT | OR | OFF | 2017/07/20 20:26 |
| S257 | 10 | (MAYTAL and Benjamin).in. | USPAT | OR | OFF | 2017/07/20 20:26 |
| S258 | 4,181 | H04L67/12.cpc. | USPAT | OR | OFF | 2017/07/20 20:27 |
| S259 | 41 | (B60Y2200/30 G06Q2240/00).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S260 | 41 | (B60Y2200/30 or G06Q2240/00).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S261 | 15 | (B60Y2200/30).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S262 | 26 | (G06Q2240/00).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S263 | 5,119 | (G01C21/00 or B60Y2200/90 or B60Y2200/50 or B60Y2200/40 or G08G1/00 or B60Y2200/13 or B60Y2200/126 or B60Y2200/12 or B60Y2200/11 or B60K31/18 or B60K31/00 or G07C5/008).cpc. | USPAT | OR | OFF | 2017/07/20 20:31 |
| S264 | 10,730 | (348/77 or 348/143 or 370/276 or 700/22 or 700/28 or 701/2 or 701/31.4 or 709/218).ccls. | USPAT | OR | OFF | 2017/07/20 20:33 |
| S265 | 11 | (may and patents).as. | USPAT | OR | OFF | 2017/07/20 20:33 |
| S266 | 6 | (may and patents).aanm. | USPAT | OR | OFF | 2017/07/20 20:34 |
| S267 | 0 | "15657163" | US-PGPUB; USPAT | ADJ | ON | 2017/09/18 11:52 |
| S268 | 11 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$).did. | US-PGPUB | OR | ON | 2017/09/18 12:22 |
| S269 | 7 | S268 and voice | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:22 |
| S270 | 8 | S268 and (audio or human) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:23 |

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| S271 | 42 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:24 |
| S272 | 25 | S271 and voice | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:25 |
| S273 | 2 | S271 and ((mic or microphone) with voice) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:27 |
| S274 | 31 | S271 and (person or human) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:38 |
| S275 | 17 | (control$4 or operat$4) with (actuator with (human) with voice) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:43 |
| S276 | 7,612 | (control$4 or operat$4) with (actuator with voice) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:55 |

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|---|---|---|---|---|---|---|
| S277 | 5 | (control$4 or operat$4) NEAR9 (actuator with voice) NEAR9 network | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:55 |
| S278 | 10 | 2009/0089065 | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:03 |
| S279 | 2 | "20090089065" | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:03 |
| S280 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/19 13:12 |
| S281 | 6 | S280 and building | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:12 |
| S282 | 0 | "15657163" | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:13 |
| S286 | 2 | "13733634" | US-PGPUB; USPAT | ADJ | ON | 2017/09/19 13:13 |
| S287 | 0 | S286 and (client adj2 device) | US-PGPUB; USPAT | ADJ | ON | 2017/09/19 13:13 |
| S288 | 5 | S280 and ((speech or voice) with (command$4 or control$4)) | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:17 |
| S289 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/27 04:43 |
| S290 | 7 | S289 and (mic or microphone) | US-PGPUB; USPAT | OR | ON | 2017/09/27 04:43 |
| S291 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US- | US-PGPUB | OR | ON | 2017/09/28 01:25 |

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|---|---|---|---|---|---|---|
| | | 20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | | | | |
| S292 | 7 | S291 and (mic or microphone or micro$1phone) | US-PGPUB; USPAT | OR | ON | 2017/09/28 01:25 |
| S293 | 43 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:46 |

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|---|---|---|---|---|---|---|
| S294 | 3,281,126 | S293 and ("same" NEAR4 device) or inside | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:46 |
| S295 | 3,281,126 | S293 and ("same" NEAR4 device) or inside | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:46 |
| S296 | 28 | S293 and (("same" NEAR4 device) or inside) | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:47 |
| S297 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/28 08:51 |
| S298 | 5 | S297 and actuator | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:51 |
| S299 | 7 | S297 and algorithm | US-PGPUB; USPAT | OR | ON | 2017/09/28 09:06 |
| S300 | 13 | S297 and sensor | US-PGPUB; USPAT | OR | ON | 2017/09/28 09:28 |
| S301 | 3 | S297 and (sensor with light) | US-PGPUB; USPAT | OR | ON | 2017/09/28 09:39 |
| S302 | 3 | (US-20070283005-$ or US-20090089065-$ or US-20150046582-$).did. | US-PGPUB | OR | ON | 2017/09/29 04:46 |
| S303 | 1 | S302 and (actuator with physical) | US-PGPUB; USPAT | OR | ON | 2017/09/29 04:47 |
| S304 | 2 | S302 and (actuator) | US-PGPUB; USPAT | OR | ON | 2017/09/29 04:47 |
| S305 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/29 04:53 |

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|---|---|---|---|---|---|---|
| S306 | 7 | S305 and (mic or microphones) | US-PGPUB; USPAT | OR | ON | 2017/09/29 04:53 |
| S307 | 10 | S305 and (address) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:22 |
| S308 | 6 | S305 and (zigbee) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:30 |
| S309 | 5 | S305 and ("802.11") | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:33 |
| S310 | 4 | S305 and (ISM) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:45 |
| S311 | 2 | S305 and (CDMA) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:48 |
| S312 | 3 | S305 and (UMTS or GSM) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:49 |
| S313 | 8 | S305 and cellular | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:49 |
| S314 | 6 | S305 and (HSPA or LTE or MBWA or "802.2" or GSM or WiMax) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:54 |
| S315 | 1 | S305 and (applicance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:23 |
| S316 | 43 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US- | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:26 |

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|---|---|---|---|---|---|---|
| | | 20110118888-$ or US-20120079149-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S317 | 14 | S316 and (applicance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:26 |
| S318 | 1,015 | network with sensor with (applicance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:28 |
| S319 | 22 | S316 and (appliance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:28 |
| S320 | 21 | S316 and (appliance or kitchen) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:29 |
| S321 | 3 | S316 and (kitchen) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:29 |
| S322 | 12 | (control$4) with network with kitchen with appliance with (speech or voice) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:33 |
| S323 | 1 | (US-20170272316-$).did. | US-PGPUB | OR | ON | 2017/09/29 06:36 |
| S324 | 12 | (US-20160062330-$ or US-20090198380-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$).did. | US-PGPUB | OR | ON | 2017/09/29 08:34 |
| S325 | 3 | S324 and (infrared or infra$1red or gamma or xrays or x$1rays) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:34 |
| S326 | 0 | S324 and (actuat$4 with motion) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:40 |

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|---|---|---|---|---|---|---|
| S327 | 4 | S324 and (actuat$4) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:41 |
| S328 | 2 | S324 and (actuat$4 with (sound or noise or volume or radio or music)) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:49 |
| S329 | 2 | S324 and (actuat$4 with (sound or noise or volume or audio or radio or music)) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:49 |
| S330 | 4 | S324 and (actuat$4 same (sound or noise or volume or audio or radio or music)) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:49 |
| S331 | 0 | "15657163" | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:02 |
| S332 | 5,777 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:03 |
| S333 | 12,682 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:03 |
| S334 | 25,214 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S335 | 25,214 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S336 | 288 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S337 | 862 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S338 | 194 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S339 | 313 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S340 | 35 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S341 | 110 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S342 | 13 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S343 | 91 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S344 | 36,907 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S345 | 155 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S346 | 9,132 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S348 | 15,985 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |

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|---|---|---|---|---|---|---|
| S349 | 40 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S350 | 42 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S351 | 381 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S352 | 39 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S353 | 13,516 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S354 | 5,776 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S355 | 41 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S356 | 387 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S357 | 48 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S358 | 44 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S359 | 0 | (fire and eye).aanm. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S360 | 140 | (fireeye).as. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S361 | 113 | (fireeye).aanm. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S362 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S363 | 674 | (home with network) same sensor same gateway same network | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S364 | 293 | (home with network) with sensor with gateway | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S365 | 5 | (home with network) with sensor with gateway with command | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S366 | 22 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |

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| | | 20110035491-$ or US-20150046582-$ or US-20160062330-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S367 | 21 | S366 and (vehicle or vehical or automobile or car) | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S368 | 21 | S366 and (vehicle or vehical or automobile or car) and actuator | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S369 | 15 | S366 and (vehicle or vehical or automobile or car) and actuator and sensor and network and cellular and wireless | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S370 | 15 | S366 and (coupled) | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S371 | 1 | S366 and (router) | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S372 | 1,030 | (vehicle or car) with router with (control or server) with network | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S373 | 18 | (vehicle or car) with router with (control or server) with network with actuator | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S374 | 2 | "20090198380" | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S375 | 1,865 | S359 S360 S361 S362 S363 S364 S365 S366 S367 S368 S369 S370 S371 S372 S373 S374 | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:44 |
| S376 | 13,516 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S377 | 27,138 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S378 | 27,138 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S379 | 293 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S380 | 889 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S381 | 202 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S382 | 329 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S383 | 37 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |

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| S384 | 113 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S385 | 17 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S386 | 94 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S387 | 38,949 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S388 | 183 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S389 | 10,308 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S390 | 44,418 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S391 | 17,401 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S392 | 127,924 | S376 S377 S378 S379 S380 S381 S382 S383 S384 S385 S386 S387 S388 S389 S390 S391 | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S393 | 2 | "15657163" | US-PGPUB; USPAT | ADJ | ON | 2018/06/15 17:22 |
| S394 | 1 | (US-20170331899-$).did. | US-PGPUB | OR | OFF | 2018/06/15 17:22 |
| S395 | 1 | (US-20170331899-$).did. | US-PGPUB | OR | OFF | 2018/06/17 15:00 |
| S396 | 1 | S395 and (voice with algorithm) | US-PGPUB | OR | OFF | 2018/06/17 15:00 |
| S397 | 1 | (US-20170331899-$).did. | US-PGPUB | OR | OFF | 2018/06/17 16:04 |
| S398 | 1 | S397 and (sensor with convection) | US-PGPUB | OR | OFF | 2018/06/17 16:04 |
| S399 | 12 | (US-20160062330-$ or US-20090198380-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$).did. | US-PGPUB | OR | OFF | 2018/06/18 06:55 |
| S400 | 0 | S399 and (voice or audio) | USPAT | OR | OFF | 2018/06/18 06:55 |

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| S401 | 0 | S399 and (voice or audio) | USPAT | OR | ON | 2018/06/18 06:55 |
| S402 | 0 | S399 and (voice or audio) | USPAT | OR | OFF | 2018/06/18 06:55 |
| S403 | 0 | S399 and audio | USPAT | OR | OFF | 2018/06/18 06:56 |
| S404 | 0 | S399 and (voice or audio) | USPAT | OR | OFF | 2018/06/18 06:56 |
| S405 | 9 | S399 and (voice or audio) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 06:56 |
| S406 | 5 | S399 and ((voice or audio or speech) with (command or control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 06:58 |
| S407 | 6 | S399 and (mic or microphone) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:02 |
| S408 | 42 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$ or US-20130308581-$).did. or (US-20110118888-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$ or US-20170272316-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US- | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:16 |

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|---|---|---|---|---|---|---|
| | | 6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S409 | 18 | S408 and (mic or microphone) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:16 |
| S410 | 7 | S408 and ((voice or audio or speech) with (command or control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:16 |
| S411 | 5 | S408 and ((voice or audio or speech) NEAR9 (command or control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:17 |
| S412 | 0 | S408 and ((speech with control with process) same (external with server)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:20 |
| S413 | 1 | S408 and ((speech with control with process) same (external)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:21 |
| S414 | 14 | S408 and (( control with process)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:21 |
| S415 | 7 | S408 and (((speech or voice or audio) with control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:22 |
| S416 | 7 | S415 and wireless | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:28 |
| S417 | 11 | S399 and (wireless) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:28 |
| S418 | 2 | "20050273505" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:53 |
| S419 | 2 | "20060212194" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:53 |
| S420 | 8 | ("20050273505" \| "20060212194" \| "20070096565" \| "20070176740" \| "20080129475" \| "20080136670" \| "20100207754" \| "20130139440").PN. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:55 |
| S421 | 0 | S420 and appliance | USPAT | OR | OFF | 2018/06/18 09:55 |
| S422 | 3 | ("20080307075" \| "20090089065" \| "20170272316").PN. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:55 |
| S423 | 0 | S422 and appliance | USPAT | OR | OFF | 2018/06/18 09:55 |
| S424 | 0 | S420 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:56 |
| S425 | 1 | S422 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:56 |
| S426 | 21 | "8447843" | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |

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|---|---|---|---|---|---|---|
| S427 | 1 | "8447843".pn. | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S428 | 3 | "20080077425" | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S429 | 0 | S428 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S430 | 0 | S428 and kitchen | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:59 |
| S431 | 21 | ("20030009271" \| "20030105389" \| "20060111825" \| "20070021847" \| "20070198144" \| "20070283005" \| "20080100428" \| "20090138136" \| "20090198380" \| "20090224906" \| "20100030421" \| "20100071053" \| "20100211258" \| "20110153149" \| "20120079149" \| "20130091279" \| "20130308581" \| "20140215491" \| "20150046582" \| "20160062330" \| "20160344745").PN. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:59 |
| S432 | 7 | S431 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:59 |
| S433 | 134 | ("0000001" \| "0000002" \| "0000030" \| "0000058" \| "0000065" \| "0000105" \| "0000135" \| "0000158" \| "0002002" \| "0006263" \| "0006324" \| "0006865" \| "0040919" \| "0064736" \| "0066069" \| "0089847" \| "0500145" \| "0732666" \| "120050044119" \| "120050247573" \| "120070112939" \| "120080263117" \| "120100201531" \| "120110041604" \| "120110222726" \| "14248123" \| "15010399" \| "15134887" \| "15710833" \| "15724456" \| "15987154" \| "16109331" \| "16188777" \| "16329160" \| "16501857" \| "16504942" \| "16549616" \| "16931596" \| "17213061" \| "17317815" \| "17321936" \| "17414186" \| "17598942" \| "17614305" \| "17617729" \| "1784721" \| "20020009383" \| "20020010938" \| "20030092261" \| "20030099228" \| "20040182167" \| "20050000120" \| "20050010957" \| "20050180561" \| "20070132725" \| "20090272193" \| "20100000218" \| "20100162815" \| "20120268373" \| "2171640" \| | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:01 |

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|---|---|---|---|---|---|---|
| | | "3184842" \| "382264836" \| "4019073" \| "4047187" \| "4243631" \| "4317991" \| "4351192" \| "4367027" \| "4414537" \| "4434451" \| "4638364" \| "4759220" \| "4796891" \| "4853884" \| "4857273" \| "4905176" \| "5046022" \| "5047952" \| "5105087" \| "5138459" \| "5274631" \| "5291234" \| "5349129" \| "5386103" \| "5402170" \| "5454043" \| "5488429" \| "5510765" \| "5511547" \| "5578877" \| "5621455" \| "56344119" \| "5652849" \| "5666159" \| "5781650" \| "5818975" \| "5835616" \| "5870138" \| "5896443" \| "5930201" \| "5948965" \| "5962786" \| "5978519" \| "5991456" \| "6069899" \| "6097470" \| "6101271" \| "6128397" \| "6132281" \| "6149312" \| "6151073" \| "6211636393148" \| "6216160" \| "6282317" \| "6285761" \| "6301370" \| "6404900" \| "6407777" \| "6421468" \| "6437576" \| "6452499" \| "6459436" \| "6473199" \| "6476372" \| "6504951" \| "6526161" \| "6535243" \| "6549234" \| "6552743" \| "6670125" \| "6693296216311" \| "6694316" \| "6714021" \| "6747258" \| "67883325" \| "6806722" \| "6820225" \| "6844897" \| "6862353" \| "6895803" \| "6940545" \| "6967565" \| "7010050" \| "7124157" \| "7239577" \| "7256466" \| "7289645" \| "7315630" \| "7327385" \| "7342212" \| "7432952" \| "7466866" \| "7499239" \| "7508961" \| "7653573" \| "7688036" \| "7692320" \| "7716985" \| "7821541" \| "7843336" \| "8016205" \| "8115646" \| "8180492" \| "8214070" \| "95578755" \| "RE00031" \| "RE33682" \| "T000005" \| "T009255" \| "T092876" \| "T746684").PN. | | | | |
| S434 | 4 | S433 and appliance | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:01 |
| S435 | 4 | S433 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:02 |
| S436 | 1 | "20040267385" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:03 |

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|---|---|---|---|---|---|---|
| S437 | 1 | S422 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:04 |
| S438 | 0 | S428 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:04 |
| S439 | 5 | S431 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:04 |
| S440 | 44 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$ or US-20130308581-$).did. or (US-20110118888-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$ or US-20170272316-$ or US-20080077425-$ or US-20040267385-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:05 |
| S441 | 8 | S440 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:05 |
| S442 | 1 | S440 and (stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:05 |

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|---|---|---|---|---|---|---|
| S443 | 22 | S440 and (appliance or stove or refrigerator or air$1conditioner or microwave) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:21 |
| S444 | 15 | S440 and (stove or refrigerator or air$1conditioner or microwave) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:21 |
| S445 | 6 | S440 and (stove or refrigerator or air adj conditioner) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:22 |
| S446 | 1 | S440 and (burner or stove or oven) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:26 |
| S447 | 0 | S399 and (burner or stove or oven) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:26 |
| S448 | 0 | S399 and (burner or stove or oven) | US-PGPUB; USPAT | OR | ON | 2018/06/18 10:26 |
| S449 | 1 | S440 and (burner or stove or oven) | US-PGPUB; USPAT | OR | ON | 2018/06/18 10:26 |
| S450 | 3 | (US-20160062330-$ or US-20070283005-$ or US-20090089065-$).did. | US-PGPUB | OR | OFF | 2018/06/18 11:23 |
| S451 | 1 | (US-20080077425-$).did. | US-PGPUB | OR | OFF | 2018/06/18 11:27 |
| S452 | 0 | S451 and IoT | US-PGPUB; USPAT | OR | ON | 2018/06/18 11:27 |
| S453 | 44 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$ or US-20130308581-$).did. or (US- | US-PGPUB; USPAT | OR | OFF | 2018/06/18 11:27 |

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|---|---|---|---|---|---|---|
| | | 20110118888-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$ or US-20170272316-$ or US-20080077425-$ or US-20040267385-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S457 | 1 | S453 and IoT | US-PGPUB; USPAT | OR | ON | 2018/06/18 11:28 |
| S458 | 1 | S450 and (LAN or (local adj2 area)) | US-PGPUB | OR | ON | 2018/06/18 11:32 |
| S459 | 227 | (yehuda and binder).in. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S460 | 31 | (benjamin and maytal).in. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S461 | 26 | (may and patents).as. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S462 | 39 | (may and patents).aanm. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S463 | 57 | S461 or S462 | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S464 | 253 | S459 or S460 | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S465 | 253 | S463 or S464 | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S466 | 2 | S465 and (vehicle and router and actuator).clm. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S467 | 9,404 | H04L67/12.cpc. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S468 | 997 | 348/77.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S469 | 374 | 700/28.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S470 | 148 | 700/22.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S471 | 1,455 | 709/218.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S472 | 12,341 | S467 or S468 or S469 or S470 or S471 | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |

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|---|---|---|---|---|---|---|
| S473 | 5,776 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S474 | 14,669 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S475 | 29,542 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S476 | 29,542 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S477 | 300 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S478 | 915 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S479 | 217 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S480 | 339 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S481 | 42 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S482 | 128 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S483 | 23 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S484 | 104 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S485 | 41,547 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S486 | 204 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S487 | 11,825 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S488 | 49,737 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S489 | 19,313 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S490 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S491 | 55 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S492 | 395 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S493 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S494 | 14,669 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |

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|---|---|---|---|---|---|---|
| S495 | 19,392 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S496 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S497 | 395 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S498 | 55 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S499 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S500 | 159,408 | S473 S474 S475 S476 S477 S478 S479 S480 S481 S482 S483 S484 S485 S486 S487 S488 S489 S490 S491 S492 S493 S494 S495 S496 S497 S498 S499 | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S501 | 10 | S500 and (vehicle and router and actuator).clm. | US-PGPUB; USPAT | ADJ | ON | 2018/06/18 13:01 |
| S502 | 2 | "15657163" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 13:02 |
| S503 | 1 | S500 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2018/06/18 13:02 |
| S504 | 5,775 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S505 | 16,337 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S506 | 30,893 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S507 | 30,893 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S508 | 307 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S509 | 964 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S510 | 228 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S511 | 372 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S512 | 47 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S513 | 139 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S514 | 28 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |

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|---|---|---|---|---|---|---|
| S515 | 117 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S516 | 43,002 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S517 | 267 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S518 | 12,674 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S519 | 52,730 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S520 | 20,427 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S521 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S522 | 56 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S523 | 396 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S524 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S525 | 16,337 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S526 | 19,576 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S527 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S528 | 396 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S529 | 56 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S530 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S531 | 167,168 | S504 S505 S506 S507 S508 S509 S510 S511 S512 S513 S514 S515 S516 S517 S518 S519 S520 S521 S522 S523 S524 S525 S526 S527 S528 S529 S530 | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S532 | 1 | S531 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2018/08/30 15:54 |
| S533 | 7 | (US-20160062330-$ or US-20070283005-$ or US-20100071053-$ or US-20130091279-$ or US-20080307075-$ or US- | US-PGPUB | OR | OFF | 2018/08/31 12:30 |

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|---|---|---|---|---|---|---|
| | | 20090089065-$ or US-20170272316-$).did. | | | | |
| S534 | 90 | ((((vocal voice) near2 (instruction recogni$4 command)) with (instruct$4 teach$4 guid$4 control$4) with (arm actuator cylinder effector end-effector slide servo stepper shuttle loader unloader axis motion robot gantry turntable lifter elevator tool "pick and place")) same server) and @ad<"20120109" | US-PGPUB; USPAT | OR | ON | 2018/12/19 15:08 |
| S535 | 3 | "15657163" | US-PGPUB | OR | OFF | 2018/12/30 19:14 |
| S536 | 5 | "7019646".pn. "20120112970" "20120303150" | US-PGPUB; USPAT | OR | ON | 2020/12/16 16:01 |
| S537 | 15 | ("20010024163" \| "20040217857" \| "20050154494" \| "20050226201" \| "20060265195" \| "20070169080" \| "20070262847" \| "20080221715" \| "20090042533" \| "20090051551" \| "20110082599" \| "20120229283" \| "20120236748" \| "20130048319" \| "20130121239").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 16:03 |
| S538 | 15 | ("20010024163" \| "20040217857" \| "20050154494" \| "20050226201" \| "20060265195" \| "20070169080" \| "20070262847" \| "20080221715" \| "20090042533" \| "20090051551" \| "20110082599" \| "20120229283" \| "20120236748" \| "20130048319" \| "20130121239").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 18:57 |
| S539 | 14 | S538 and sensor | US-PGPUB; USPAT | OR | ON | 2020/12/16 18:57 |
| S540 | 29 | ("0821344" \| "10026116" \| "10213810" \| "10232408" \| "10239094" \| "20010025349" \| "20010041982" \| "20060220830" \| "20070283005" \| "20080031139" \| "20080130520" \| "20090046715" \| "20090076827" \| "20090271002" \| "20100211359" \| "20100298957" \| "20110148651" \| "20110170377" \| "20110298301" \| "20130235197" \| "20150138333" \| "20150324706" \| "20150362954" \| "20180137462" \| "6546297" \| "6813221" \| "9165320" \| "9821344" \| "9908153").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |

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| S541 | 8 | S540 and (sensor and actuator) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |
| S542 | 8 | S540 and (sensor and fire) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |
| S543 | 3 | S541 and S542 | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |
| S544 | 4 | ("20020198626" \| "20050216121" \| "20090055019" \| "20120034904").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:17 |
| S545 | 2 | S544 and (sensor and actuator) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:18 |
| S546 | 30 | ("20020112726" \| "20060206155" \| "20070208390" \| "20080291036" \| "20090005720" \| "20090033522" \| "20090105605" \| "20090189981" \| "20100039253" \| "20100100004" \| "20100187832" \| "20100195601" \| "20100281884" \| "20110034912" \| "20110047874" \| "20110050216" \| "20110282168" \| "20120130203" \| "20120179067" \| "20120190292" \| "20120265026" \| "20130151200" \| "20130211858" \| "20150222852" \| "20180242859" \| "4472656" \| "5077512" \| "5696879" \| "8244405" \| "8615374").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:23 |
| S548 | 9 | S546 and (sensor and actuator) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:24 |
| S549 | 8 | S546 and (sensor and fire) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:24 |
| S550 | 15 | ("20010024163" \| "20040217857" \| "20050154494" \| "20050226201" \| "20060265195" \| "20070169080" \| "20070262847" \| "20080221715" \| "20090042533" \| "20090051551" \| "20110082599" \| "20120229283" \| "20120236748" \| "20130048319" \| "20130121239").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:26 |
| S551 | 12 | (US-20160062330-$ or US-20070283005-$ or US-20100071053-$ or US-20130091279-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$ or US-20050154494-$ or US-20130121239-$ or US-20010024163-$ or US- | US-PGPUB; USPAT | OR | ON | 2020/12/18 02:34 |

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|---|---|---|---|---|---|---|
| | | 20090051551-$).did. or (US-7019646-$).did. | | | | |
| S553 | 4 | S551 and (microphon$2 or mic) | US-PGPUB; USPAT | OR | ON | 2020/12/18 02:35 |
| S554 | 2 | "20150138333" | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S555 | 5,774 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S556 | 27,508 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S557 | 46,791 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S558 | 46,791 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S559 | 379 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S560 | 1,246 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S561 | 309 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S562 | 520 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S563 | 122 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S564 | 195 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S565 | 105 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S566 | 165 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S567 | 60,121 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S568 | 637 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S569 | 23,829 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S570 | 88,949 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S571 | 34,665 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S572 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S573 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |

| | | | | | | |
|---|---|---|---|---|---|---|
| S574 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S575 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S576 | 27,508 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S577 | 21,277 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S578 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S579 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S580 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S581 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S582 | 252,008 | S555 S556 S557 S558 S559 S560 S561 S562 S563 S564 S565 S566 S567 S568 S569 S570 S571 S572 S573 S574 S575 S576 S577 S578 S579 S580 S581 | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S583 | 1 | S582 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2020/12/18 11:17 |
| S584 | 812 | ((speech or sound) with voice with actuator) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:24 |
| S585 | 54,241 | ((speech or sound or voice) with actuator) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:25 |
| S586 | 3,641 | S585 and (sensor with (appliance or vehicle)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:25 |
| S587 | 391 | S586 and ((car or automobile or vehicle or truck or transport$6) with (mic or microphone)) | US-PGPUB; USPAT; USOCR; | OR | ON | 2020/12/18 11:26 |

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|---|---|---|---|---|---|---|
| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S588 | 224 | S587 and ((speech or voice or audio) with process$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:27 |
| S589 | 90 | S588 and ((voice or speech) with (person or human)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:27 |
| S590 | 151 | S588 and ((voice or speech) with (person or human or user)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:27 |
| S591 | 151 | S590 and ((control$4 or operating or operat$2) with (device or actuator)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:29 |
| S592 | 125 | S591 and (wireless with network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:31 |
| S593 | 54,690 | ((speech or sound or voice) with actuator) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| S594 | 3,747 | S593 and (sensor with (appliance or vehicle)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; | OR | ON | 2021/01/29 01:25 |

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|---|---|---|---|---|---|---|
| | | | JPO; DERWENT; IBM_TDB | | | |
| S595 | 400 | S594 and ((car or automobile or vehicle or truck or transport$6) with (mic or microphone)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| S596 | 230 | S595 and ((speech or voice or audio) with process$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| S597 | 155 | S596 and ((voice or speech) with (person or human or user)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| S598 | 155 | S597 and ((control$4 or operating or operat$2) with (device or actuator)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| S599 | 129 | S598 and (wireless with network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| S600 | 5,774 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S601 | 27,960 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S602 | 47,507 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S603 | 47,507 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S604 | 379 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |

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| S605 | 1,266 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S606 | 311 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S607 | 527 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S608 | 128 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S609 | 197 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S610 | 112 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S611 | 167 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S612 | 60,955 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S613 | 660 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S614 | 24,314 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S615 | 90,678 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S616 | 35,341 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S617 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S618 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S619 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S620 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S621 | 27,960 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S622 | 21,336 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S623 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S624 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S625 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S626 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |

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|---|---|---|---|---|---|---|
| S627 | 255,881 | S600 S601 S602 S603 S604 S605 S606 S607 S608 S609 S610 S611 S612 S613 S614 S615 S616 S617 S618 S619 S620 S621 S622 S623 S624 S625 S626 | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| S628 | 1 | S627 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2021/01/29 01:26 |

**EAST Search History (Interference)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L35 | 49,979 | H04L67/12.cpc. B60K31/00.cpc. B60K31/18.cpc. B60Y2200/11.cpc. B60Y2200/12.cpc. B60Y2200/126.cpc. B60Y2200/13.cpc. B60Y2200/30.cpc. B60Y2200/40.cpc. B60Y2200/50.cpc. B60Y2200/90.cpc. G01C21/00.cpc. G06Q2240/00.cpc. G07C5/008.cpc. G08G1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:47 |
| L36 | 79 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:47 |
| L37 | 136 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:47 |
| L38 | 496 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:47 |
| L39 | 57 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:47 |
| L40 | 50,500 | 35 36 37 38 39 | US-PGPUB; USPAT | OR | ON | 2021/07/31 14:49 |
| L41 | 1 | 40 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2021/07/31 14:49 |

7/31/2021 2:49:31 PM
C:\Users\hkhan2\Documents\EAST\Workspaces\15657163.wsp

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**
**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

**U.S.PATENTS** Remove

| Examiner Initial* | Cite No | Patent Number | Kind Code[1] | Issue Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | 5555498 | A | 1996-09-10 | CHARLES J. BERRA | |
| | 2 | 6957133 | B1 | 2005-10-18 | Robert Hunt | |
| | 3 | 7904219 | B1 | 2011-03-08 | Larkin H. Lowrey | |
| | 4 | 7103460 | B1 | 2006-09-05 | David S. Breed | |

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| Examiner Initial* | Cite No | Publication Number | Kind Code[1] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | 20140215491 | A1 | 2014-07-31 | Sateesh K. Addepalli | |
| | 2 | 20100071053 | A1 | 2010-03-18 | Amir Ansari | |



ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 3 | 20070021847 | A1 | 2007-01-25 | Akihiko Hyodo | |
| | 4 | 20110153149 | A1 | 2011-06-23 | Hong Seok Jeon | |
| | 5 | 20090138136 | A1 | 2009-05-28 | Akihiro Natsume | |
| | 6 | 20060111825 | A1 | 2006-05-25 | Minoru Okada | |
| | 7 | 20080100428 | A1 | 2008-05-01 | Sherry D. Price | |
| | 8 | 20070198144 | A1 | 2007-08-23 | William Robert Norris | |
| | 9 | 20030009271 | A1 | 2003-01-09 | Susumu Akiyama | |
| | 10 | 20100211258 | A1 | 2010-08-19 | Kohei SAKURAI | |
| | 11 | 20100030421 | A1 | 2010-02-04 | Kentaro YOSHIMURA | |
| | 12 | 20150046582 | A1 | 2015-02-12 | David C. Gelvin | |
| | 13 | 20070069947 | A1 | 2007-03-29 | Matthew Banet | |



ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 14 | 20100023198 | A1 | 2010-01-28 | Brennan Todd Hamilton | |
| | 15 | 20030093199 | A1 | 2003-05-15 | Michael Mavreas | |
| | 16 | 20030130774 | A1 | 2003-07-10 | Pradeep R. Tripathi | |
| | 17 | 20080122288 | A1 | 2008-05-29 | James Plante | |
| | 18 | 20050146458 | A1 | 2005-07-07 | Steve Douglas Carmichael | |
| | 19 | 20060025897 | A1 | 2006-02-02 | Oleksandr T. Shostak | |
| | 20 | 20100305807 | A1 | 2010-12-02 | Otman A. Basir | |
| | 21 | 20070038461 | A1 | 2007-02-15 | Lisa Abbott | |
| | 22 | 20080215336 | A1 | 2008-09-04 | Christopher L. Oesterling | |
| | 23 | 20120212341 | A1 | 2012-08-23 | Bernd Siber | |

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|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| Examiner Initial* | Cite No | Foreign Document Number[3] | Country Code[2] | Kind Code[4] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear | T[5] |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2011051022 | WO | A1 | 2011-05-05 | SIBER BERND | | |

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**EXAMINER SIGNATURE**

| Examiner Signature | /HASSAN A KHAN/ | Date Considered | 07/31/2021 |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.



ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2021-07-16 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**



ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

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1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



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PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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| PATENT APPLICATION FEE DETERMINATION RECORD<br>Substitute for Form PTO-875 | Application or Docket Number<br>15/657,163 | Filing Date<br>07/23/2017 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY:** ☐ LARGE ☑ SMALL ☐ MICRO

## APPLICATION AS FILED - PART I

| FOR | (Column 1)<br>NUMBER FILED | (Column 2)<br>NUMBER EXTRA | | RATE ($) | FEE ($) |
|---|---|---|---|---|---|
| ☐ BASIC FEE<br>(37 CFR 1.16(a), (b), or (c)) | N/A | N/A | | N/A | |
| ☐ SEARCH FEE<br>(37 CFR 1.16(k), (i), or (m)) | N/A | N/A | | N/A | |
| ☐ EXAMINATION FEE<br>(37 CFR 1.16(o), (p), or (q)) | N/A | N/A | | N/A | |
| TOTAL CLAIMS<br>(37 CFR 1.16(i)) | minus 20 = | * | | x $40 = | |
| INDEPENDENT CLAIMS<br>(37 CFR 1.16(h)) | minus 3 = | * | | x $210 = | |
| ☐ APPLICATION SIZE FEE (37 CFR 1.16(s)) | If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | | |
| ☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | | |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | | TOTAL | |

## APPLICATION AS AMENDED - PART II

| | | (Column 1) | | (Column 2) | (Column 3) | | | |
|---|---|---|---|---|---|---|---|---|
| AMENDMENT | 07/18/2021 | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | | RATE ($) | ADDITIONAL FEE ($) |
| | Total<br>(37 CFR 1.16(i)) | * 29 | Minus | ** 30 | = 0 | | x $50 = | 0 |
| | Independent<br>(37 CFR 1.16(h)) | * 1 | Minus | *** 3 | = 0 | | x $240 = | 0 |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | |
| | | | | | | | TOTAL ADD'L FEE | 0 |

| | | (Column 1) | | (Column 2) | (Column 3) | | | |
|---|---|---|---|---|---|---|---|---|
| AMENDMENT | | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | | RATE ($) | ADDITIONAL FEE ($) |
| | Total<br>(37 CFR 1.16(i)) | * | Minus | ** | = | | x $0 = | |
| | Independent<br>(37 CFR 1.16(h)) | * | Minus | *** | = | | x $0 = | |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | |
| | | | | | | | TOTAL ADD'L FEE | |

| | |
|---|---|
| * If the entry in column 1 is less than the entry in column 2, write "0" in column 3. | LIE |
| ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". | /VIOLA D ROGERS/ |
| *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". | |
| The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1. | |

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**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**
**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

**U.S.PATENTS** Remove

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|---|---|---|---|---|---|---|
| | 1 | 5555498 | A | 1996-09-10 | CHARLES J. BERRA | |
| | 2 | 6957133 | B1 | 2005-10-18 | Robert Hunt | |
| | 3 | 7904219 | B1 | 2011-03-08 | Larkin H. Lowrey | |
| | 4 | 7103460 | B1 | 2006-09-05 | David S. Breed | |

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| | 1 | 20140215491 | A1 | 2014-07-31 | Sateesh K. Addepalli | |
| | 2 | 20100071053 | A1 | 2010-03-18 | Amir Ansari | |

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
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| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 3 | 20070021847 | A1 | 2007-01-25 | Akihiko Hyodo | |
| | 4 | 20110153149 | A1 | 2011-06-23 | Hong Seok Jeon | |
| | 5 | 20090138136 | A1 | 2009-05-28 | Akihiro Natsume | |
| | 6 | 20060111825 | A1 | 2006-05-25 | Minoru Okada | |
| | 7 | 20080100428 | A1 | 2008-05-01 | Sherry D. Price | |
| | 8 | 20070198144 | A1 | 2007-08-23 | William Robert Norris | |
| | 9 | 20030009271 | A1 | 2003-01-09 | Susumu Akiyama | |
| | 10 | 20100211258 | A1 | 2010-08-19 | Kohei SAKURAI | |
| | 11 | 20100030421 | A1 | 2010-02-04 | Kentaro YOSHIMURA | |
| | 12 | 20150046582 | A1 | 2015-02-12 | David C. Gelvin | |
| | 13 | 20070069947 | A1 | 2007-03-29 | Matthew Banet | |

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| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 14 | 20100023198 | A1 | 2010-01-28 | Brennan Todd Hamilton | |
| | 15 | 20030093199 | A1 | 2003-05-15 | Michael Mavreas | |
| | 16 | 20030130774 | A1 | 2003-07-10 | Pradeep R. Tripathi | |
| | 17 | 20080122288 | A1 | 2008-05-29 | James Plante | |
| | 18 | 20050146458 | A1 | 2005-07-07 | Steve Douglas Carmichael | |
| | 19 | 20060025897 | A1 | 2006-02-02 | Oleksandr T. Shostak | |
| | 20 | 20100305807 | A1 | 2010-12-02 | Otman A. Basir | |
| | 21 | 20070038461 | A1 | 2007-02-15 | Lisa Abbott | |
| | 22 | 20080215336 | A1 | 2008-09-04 | Christopher L. Oesterling | |
| | 23 | 20120212341 | A1 | 2012-08-23 | Bernd Siber | |

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| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

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|---|---|---|---|---|---|---|---|---|
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|---|---|---|
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☒ A certification statement is not submitted herewith.

**SIGNATURE**

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| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2021-07-16 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

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(19) Weltorganisation für geistiges Eigentum
Internationales Büro

(43) Internationales Veröffentlichungsdatum
5. Mai 2011 (05.05.2011)

PCT

(10) Internationale Veröffentlichungsnummer
WO 2011/051022 A1

(51) Internationale Patentklassifikation:
*G08B 25/10* (2006.01)

(21) Internationales Aktenzeichen: PCT/EP2010/062722

(22) Internationales Anmeldedatum:
31. August 2010 (31.08.2010)

(25) Einreichungssprache: Deutsch

(26) Veröffentlichungssprache: Deutsch

(30) Angaben zur Priorität:
10 2009 046 096.9
28. Oktober 2009 (28.10.2009) DE

(71) Anmelder *(für alle Bestimmungsstaaten mit Ausnahme von US)*: **ROBERT BOSCH GMBH** [DE/DE]; Postfach 30 02 20, 70442 Stuttgart (DE).

(72) Erfinder; und
(75) Erfinder/Anmelder *(nur für US)*: **OPPELT, Ulrich** [DE/DE]; Obere Bahnhofstr. 40, 85604 Zorneding (DE). **SIBER, Bernd** [DE/DE]; Glonner Strasse 4, 85625 Baiern-Antholing (DE).

(74) Gemeinsamer Vertreter: **ROBERT BOSCH GMBH**; Postfach 30 02 20, 70442 Stuttgart (DE).

(81) Bestimmungsstaaten *(soweit nicht anders angegeben, für jede verfügbare nationale Schutzrechtsart)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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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Veröffentlicht:

— *mit internationalem Recherchenbericht (Artikel 21 Absatz 3)*

(54) Title: ALARM DEVICE FOR DETECTING AND COMMUNICATING ENVIRONMENT- AND SYSTEM-SPECIFIC STATES

(54) Bezeichnung : ALARMEINRICHTUNG ZUR ERKENNUNG UND MITTEILUNG VON UMGEBUNGS- UND ANLAGENSPEZIFISCHEN ZUSTÄNDEN

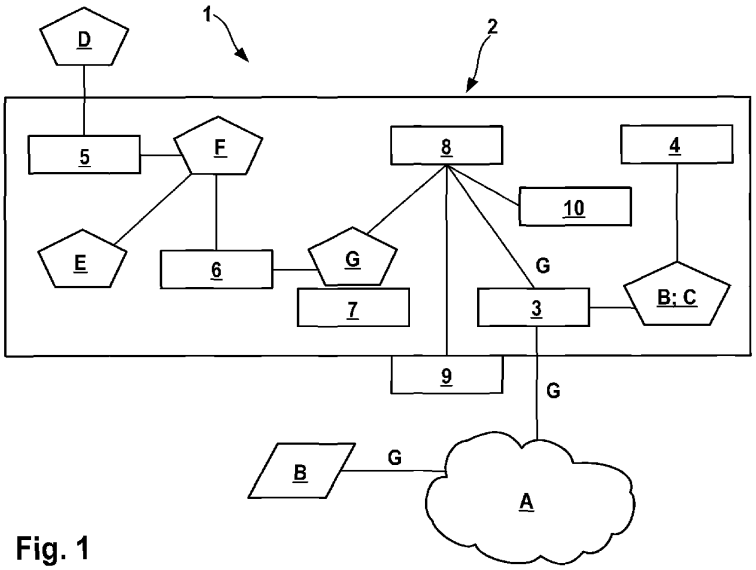



Fig. 1

(57) Abstract: The invention relates to an alarm device 1 for detecting and communicating environment- and device-specific states, comprising a communication interface 3 for the wireless transmission of information G to one or more destination addresses B, wherein the communication interface 3 is designed in particular as a WLAN interface and/or as a mobile radio interface, wherein the communication interface is designed in terms of program and/or circuitry to establish and/or maintain access to the public Internet (A) in order to transmit the information (G) to one or more destination addresses (B).

(57) Zusammenfassung: Alarmeinrichtung 1, zur Erkennung und Mitteilung von umgebungs- und einrichtungsspezifischen Zuständen, mit einer Kommunikationsschnittstelle 3 zur kabellosen Übertragung von Informationen G an eine oder mehrere Zieladressen B, wobei die Kommunikationsschnittstelle 3 insbesondere als WLAN-Schnittstelle und/oder als eine Mobilfunkschnittstelle ausgebildet ist, wobei die Kommunikationsschnittstelle programmtechnisch und/oder schaltungstechnisch ausgebildet ist, einen Zugang zum öffentlichen Internet (A) herzustellen und/oder aufrechtzuerhalten, um die Informationen (G) an die eine oder mehrere Zieladressen (B) zu übertragen.

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Beschreibung

Titel
Alarmeinrichtung zur Erkennung und Mitteilung von umgebungs- und anlagenspezifischen Zuständen

Stand der Technik

Die Erfindung betrifft eine Alarmeinrichtung zur Erkennung und Mitteilung von umgebungs- und anlagenspezifischen Zuständen, mit einer Kommunikationsschnittstelle zur kabellosen Übertragung von Informationen an eine oder mehrere Zieladressen, wobei die Kommunikationsschnittstelle insbesondere als eine WLAN-Schnittstelle und/oder als eine Mobilfunkschnittstelle ausgebildet ist.

Alarmeinrichtungen haben die Aufgabe, Personen in einer Umgebung der Alarmeinrichtung auf eine Gefahrensituation hinzuweisen und so letztlich auch Leben retten zu können. Üblicherweise sind mehrere Alarmeinrichtungen in Wohnungen, Gebäuden oder Gebäudekomplexen integriert und miteinander über Kabel oder Funk vernetzt, um an jedem Ort über die Gefahrensituation informieren zu können. Aus vielen Anwendungen ist es bekannt, dass Alarmeinrichtungen über Draht oder Funk einen Notruf zu einem externen Dienstleister, wie z.B. einem Sicherheitsdienst oder einer Einsatzzentrale, absetzen können, um schnell und gezielt Hilfe anzufordern.

Die Schrift US 7 019 646 B1, die wohl den nächstliegenden Stand der Technik bildet, beschreibt eine Vorrichtung und ein Verfahren zur Ortung eines kabellosen Rauchmelders bei einem potentiellen Brandfall. Der kabellose Rauchmelder weist eine Schnittstelle, z.B. eine WLAN-Schnittstelle, zu einem kabellosen Transceiver (Sende-Empfangsanlage) auf, der über ein existierendes kabelloses Telekommunikationsnetzwerk arbeitet. Der kabellose Transceiver kann als ein Prozessor mit einem integrierten Speicher zum Speichern von Alarmdaten ausgebildet sein. Er ist dazu geeignet, die Alarmdaten bei einem Alarmfall automatisch an eine Einsatzzentrale zu übertragen.

Offenbarung der Erfindung

Im Rahmen der Erfindung wird eine Alarmeinrichtung zur Erkennung und Mitteilung eines umgebungs- und einrichtungsspezifischen Zustandes mit den Merkmalen des Anspruchs 1, sowie eine Alarmanlage mit den Merkmalen des Anspruchs 12 vorgeschlagen. Bevorzugte oder vorteilhafte Ausführungsformen der Erfindung ergeben sich aus den Unteransprüche, der nachfolgenden Beschreibung sowie den beigefügten Figuren.

Die erfindungsgemäße Alarmeinrichtung ist ausgebildet, mindestens einen Umgebungsparameter zu erfassen, insbesondere zu überwachen, und diesen oder einen davon abgeleiteten Parameter als umgebungsspezifischen Zustand zu übermitteln. Vorzugsweise umfasst die Alarmeinrichtung einen Feuer-, Rauch-, Bewegungs- oder Existenzmelder zur Erkennung des Umgebungsparameters. Insbesondere weist die Alarmeinrichtung eine Sensoreinheit auf, die dazu geeignet und/oder ausgebildet ist, einen Umgebungsparameter, wie z. B. eine Temperatur, eine Gas- und/oder Partikelkonzentration, ein Umgebungsbild etc. zu erfassen.

Alternativ oder ergänzend ist die Alarmeinrichtung dazu geeignet und/oder ausgebildet, mindestens einen Funktionsparameter der Alarmeinrichtung zu erfassen, insbesondere zu überwachen, und diesen als einrichtungsspezifischen Zustand der Alarmeinrichtung zu übermitteln. Die Funktionsparameter können z.B. Kenngrößen einer Selbstdiagnose oder von Betriebsparametern der Alarmeinrichtung sein.

Die Alarmeinrichtung weist vorzugsweise eine Auswerteeinheit auf, die dazu geeignet und/oder ausgebildet ist, die Parameter, insbesondere die Umgebungsparameter und/oder die Funktionsparameter, auszuwerten und den umgebungs- und/oder einrichtungsspezifischen Zustand zu erkennen.

Im Rahmen der Erfindung ist unter dem umgebungsspezifischen Zustand z.B. ein Ereignisfall zu verstehen, der beispielsweise eine Gefahrensituation, wie z.B. einen Brand, eine überhöhte Rauchkonzentration, die Bewegung eines Objekts

und/oder die Existenz eines Objekts umfasst. Der umgebungsspezifische Zustand kann aber auch eine Normalsituation, insbesondere eine Nicht-Gefahrensituation und/oder eine Entwarnungssituation umfassen.

Üblicherweise umfasst der einrichtungsspezifische Zustand einen Funktionsfähigkeits- und/oder Betriebszustandsstatus der Alarmeinrichtung. Ist der Betrieb und/oder die Funktion der Alarmeinrichtung nur eingeschränkt oder nicht verfügbar oder ist also die Alarmeinrichtung ganz oder teilweise defekt, so ist unter dem einrichtungsspezifischen Zustand ebenfalls ein Ereignisfall zu verstehen.

Die Alarmeinrichtung weist eine Kommunikationsschnittstelle auf, die vorzugsweise als WLAN-Schnittstelle ausgebildet ist. Vorzugsweise ist die WLAN- Schnittstelle eine Schnittstelle zu einem Wireless Local Area Network, einem lokalen auf der Norm IEEE 802.11 basierenden Funknetz, das üblicherweise OFDM (Orthogonal Frequency Division Multiplex) als Modulationsverfahren einsetzt. Insbesondere weist die Alarmeinrichtung ein WLAN- Modul auf. Alternativ oder ergänzend ist die Kommunikationsschnittstelle als Schnittstelle zu einem drahtlosen, lokalen Funknetz ausgebildet.

Alternativ oder ergänzend umfasst die Kommunikationsschnittstelle eine Mobilfunkschnittstelle, die ausgebildet ist, mit einem öffentlichen Mobilfunknetz in Verbindung zu treten, Derartige öffentliche Mobilfunknetze dienen insbesondere dazu, Dienste für ein Mobiltelefon bereitzustellen. Die Mobilfunkschnittstelle ist insbesondere ausgebildet, einen beliebigen Dienst des öffentlichen Mobilfunknetzes zu verwenden, wie z.B. den Sprachdienst, SMS-Dienst und/oder einen Datenübertragungsdienst.

Erfindungsgemäß ist die Kommunikationsschnittstelle programmtechnisch und/oder schaltungstechnisch derart ausgebildet, einen Zugang zum öffentlichen Internet herzustellen und/oder aufrecht zu erhalten, um Informationen an eine oder mehrere Zieladressen kabellos zu übertragen. Insbesondere erfolgt eine direkte und/oder unmittelbare Verbindung von der Alarmeinrichtung mit dem Internet und/oder es wird das Internet-Protokoll (IP) des TCP/IP-Modells oder das Protokoll einer anderen Internetprotokollfamilie zur Übermittlung der Informationen verwendet. Insbesondere erhält die Alarmeinrichtung bei der

Verbindung mit dem öffentlichen Internet eine eigene und/oder eine der Alarmeinrichtung zugeordnete IP-Adresse. Die Zieladressen können beliebig ausgewählte Adressen, wie z.B. die einer Einsatzzentrale, eines Sicherheitsdiensts, eines Firmenrechners des Inhabers der Alarmeinrichtung, eines Rechners des Nachbars des Inhabers, etc. sein. Insbesondere sind die Zieladressen als IP-Adressen ausgebildet.

Vorzugsweise umfassen die Informationen Hinweise auf den umgebungs- und/oder einrichtungsspezifischen Zustand, insbesondere auf den Ereignisfall. Besonders bevorzugt ist der umgebungs- und/oder einrichtungsspezifischen Zustand als Dateninhalt über das Internet übertragbar und/oder wird übertragen.

Viele Unternehmen oder Haushalte nutzen die WLAN-Technologie (wireless local area network) bereits, um mehrere Geräte in einem Gebäude mit dem Internet zu verbinden. Oft erfolgt dies über eine sogenannte „flat rate“, was bedeutet, dass der Internetzugang und/oder die Internetverbindung zu tragbaren Kosten dauerhaft zur Verfügung stehen können. Die Erfindung nutzt die hohe Verfügbarkeit derartiger WLAN-Installationen und schlägt vor, die Alarmeinrichtung mit einer eigenen WLAN-Schnittstelle auszustatten, die der Alarmeinrichtung eine eigene Verbindung in das Internet ermöglicht. Selbstverständlich kann bei Bedarf für die Alarmeinrichtung auch ein eigenes WLAN-Netz eingerichtet werden. Alternativ oder ergänzend wird das weit verfügbare Mobilfunknetz mit analogen Vorteilen verwendet, so dass im Rahmen der Erfindung eine internetfähige Alarmeinrichtung vorgeschlagen wird,

Es ist ein nutzbarer Vorteil der Erfindung, dass Zieladressen über das Internet über den umgebungs- und/oder einrichtungsspezifischen Zustand der Alarmeinrichtung, insbesondere über Ereignisfälle, zeitnah informiert werden können. Diese Zieladressen haben die Möglichkeit, den umgebungs- und einrichtungsspezifischen Zustand zu überprüfen, obwohl sie sich nicht in einer Umgebung der Alarmeinrichtung befinden. Ein akustischer oder optischer Alarm läuft bei einer Nichtanwesenheit zu schützender oder überwachender Personen nicht ins Leere, da eine Mitteilung über den Ereignisfall, insbesondere die Gefahrensituation über das Internet an die Zieladressen weitergeleitet werden kann.

Ein weiterer nutzbarer Vorteil der Erfindung ist, dass die Alarmeinrichtung über die WLAN-Schnittstelle und/oder über einen WLAN-Router des LAN-Netzes und/oder über die IP-Adresse und/oder über die Telefonnummer eindeutig lokalisierbar ist. So kann die Zieladresse, z.B. die Einsatzzentrale, bei der Übermittlung der Informationen sofort erkennen, um welche Alarmeinrichtung es sich handelt und wo diese eingesetzt ist. Dies ist z.B. durch eine Entschlüsselung der IP-Adresse oder Telefonnummer der Alarmeinrichtung oder durch ein Mitsenden von Standortinformationen möglich.

Ebenfalls ist es optional möglich, den einrichtungsspezifischen Zustand der Alarmeinrichtung von extern zu überprüfen. Somit kann eine Person auch bei Nichtanwesenheit in der Umgebung der Alarmeinrichtung sicher sein, dass die Alarmeinrichtung funktionsfähig ist oder bei einer Fehlermeldung entsprechende Aktionen einleiten. Eine derartige Überprüfung kann z.B. von einer Zieladresse oder - bei entsprechender Konfiguration - von jedem Internetzugang auf der Welt durchgeführt werden. Es ist auch möglich, dass die Alarmeinrichtung über das Internet mit einem externen Datenlogger verbindbar ist und/oder verbunden ist, wobei die Zustände, insbesondere die einrichtungsspezifischen Zustände, protokolliert werden, so dass ein Nachweis über die Funktionsfähigkeit der Alarmeinrichtung erstellbar ist, ohne die Alarmeinrichtung vor Ort prüfen zu müssen.

Vorteilhaft ist weiterhin, dass WLAN- Module hinreichend bekannt und bereits in vielen elektronischen Geräten, wie z.B. in tragbaren Computern oder in Mobiltelefonen verbreitet sind. Es sind also auch WLAN- Module in kleinen Baugrößen und mit stromoptimierten Eigenschaften erhältlich, die durch ihre Größe auch ohne weiteres auch in einer Alarmeinrichtung integrierbar sind. Als weiterer Vorteil ist zu nennen, dass die WLAN- Module durch den Bedarf hoher Stückzahlen mittlerweile zu vertretbaren Kosten erhältlich sind und die Erfindung so zu maßvollen Preisen umsetzbar ist. Auch Module für Mobilfunkschnittstellen sind mittlerweile kostengünstig verfügbar.

In einer bevorzugten Ausführungsform ist die Alarmeinrichtung als ein Rauch- und/oder Brandmelder in einem Gehäuse ausgebildet. Insbesondere ist das Gehäuse dazu ausgebildet, an der Wand oder Decke eines Raumes montiert zu

werden. Optional kann die Alarmeinrichtung batteriebetrieben sein oder einen Versorgungsanschluss, insbesondere einen Netzanschluss aufweisen.

In manchen Ausführungsformen weist die Alarmeinrichtung eine Taste zum Ein- und Ausschalten auf. Einem Nutzer wird es dadurch u. a. ermöglicht, einen Informationsaustausch mit den Zieladressen zu verhindern bzw. zu deaktivieren oder gezielt zu aktivieren.

Vorzugsweise umfasst die Alarmeinrichtung eine Steuereinheit zur Ansteuerung einer Signaleinheit, die dazu ausgebildet ist, optische und/oder akustische Alarm- oder Entwarnungssignale auszugeben, so dass ein lokales Signal am Standort der Alarmeinrichtung erzeugt wird.

Alternativ oder ergänzend ist die Steuereinheit auch zur Ansteuerung eines elektronischen Schalters ausgebildet, der die Kommunikationsschnittstelle mit einer Energiequelle, wie z.B. einer Batterie verbinden oder von dieser trennen kann. Der elektronische Schalter kann alternativ auch dazu ausgebildet sein, die Alarmeinrichtung zu übertragungsfreien Zeiten in einen Stromsparmodus zu versetzen und/oder von der WLAN-Funktion bzw. Mobilfunkfunktion zu trennen.

Soll der umgebungsspezifische und/oder der einrichtungsspezifische Zustand übertragen werden, so kann durch die Ansteuerung des elektronischen Schalters eine Verbindung für die Übertragung der Informationen über die Kommunikationsschnittstelle aktiviert werden. Nach erfolgter Übertragung wird die Alarmeinrichtung durch erneute Ansteuerung des elektronischen Schalters in einen Ruhezustand versetzt, der keinen Stromverbrauch oder einen reduzierten Stromverbrauch aufweist.

Vorteilhaft ist, dass die Steuereinheit die Kommunikationsverbindung über den elektronischen Schalter nur zu einem Übermittlungszeitpunkt aktiviert und im Ruhezustand deaktiviert. Somit wird keine unnötige Energie durch das WLAN-Modul verbraucht. Insbesondere wenn die Alarmeinrichtung einen Versorgungsanschluss, insbesondere einen Netzanschluss aufweist, kann die Alarmeinrichtung optional auch ohne den elektronischen Schalter ausgebildet sein. Die Alarmeinrichtung kann dann dauerhaft mit Energie versorgt werden und die Kommunikationsverbindung permanent zur Verfügung stehen.

In einer weiteren möglichen Ausgestaltung der Erfindung erfolgt die Übertragung der Informationen als eine E-Mail, SMS und/oder als ein Voice- Mail. Vorzugsweise ist die Übertragung der E-Mail, der SMS und/oder der Voice- Mail Internet gestützt. Insbesondere werden die E-Mail und/oder die SMS auf einen Rechner und/oder auf ein mobiles Gerät, wie z.B. ein Mobiltelefon oder ein Smartphone, übertragen. Bei Übermittlung des Voice- Mails erfolgt eine Sprachnachricht üblicherweise auf einen fest installierten und/oder ortsgebundenen Telefonanschluss.

In einer möglichen Ausführungsform weist die Alarmeinrichtung eine Konfigurationsschnittstelle zur Übermittlung von Übertragungsmodalitäten auf. Vorzugsweise ist die Konfigurationsschnittstelle als eine Datenschnittstelle, insbesondere USB- Schnittstelle ausgebildet. Besonders bevorzugt ist, dass die Konfigurationsschnittstelle an einer leicht zugänglichen Stelle der Alarmeinrichtung angeordnet ist und so problemlos mit einem PC verbindbar ist. Über den PC können Einstellungen zum Verbindungsaufbau und zur Verschlüsselung, wie etwa WPA (Wi-Fi Protected Access), eingegeben und über die Konfigurationsschnittstelle in der Alarmeinrichtung eingestellt werden. Ebenfalls ermöglicht die Konfigurationsschnittstelle z. B. eine Festlegung der Web-, E-Mailadressen, Telefonnummern oder Passwörter der gewünschten Zieladressen über den PC.

In einer weiteren möglichen Ausführungsform ist die Alarmeinrichtung zur aktiven Übermittlung der Informationen an die mindestens eine Zieladresse ausgebildet. Vorzugsweise weist die Alarmeinrichtung eine Push-Funktion auf, bei der sie aktiv die Informationen sendet. Beispielsweise steuert sie selbstständig in einer Gefahrensituation die Übermittlung einer Alarmmeldung an die mindestens eine Zieladresse an.

Denkbar ist auch, dass die Alarmeinrichtung unaufgefordert, optional zu konfigurierten Zeitpunkten, z.B. alle acht Stunden oder einmal pro Tag, bei Normalsituationen eine Entwarnungsmeldung, insbesondere im Rahmen der Push-Funktion, sendet. Es ist weiterhin vorstellbar, dass eine Rücksetzmeldung, die von sich in einer Umgebung der Alarmeinrichtung aufhaltenden Personen vorgenommen wurde, von der Alarmeinrichtung an die Zieladressen übermittelt

werden kann. Dadurch erkennen die Zieladressen, dass ein Fehlalarm von den Personen gestoppt wurde oder eine Entspannung der Gefahrenlage vorliegt.

Optional können auch die Funktionsparameter als einrichtungsspezifische Zustände selbsttätig durch die Alarmeinrichtung übermittelt werden. Dies kann beispielsweise zyklisch erfolgen. Dadurch wird ermöglicht, dass z.B. ein Batteriestatus, ein Verschmutzungsgrad der Sensoreinheit und/oder eine Statusmeldung der Elektronik, etc., der Alarmeinrichtung von der Zieladresse geprüft werden kann und entsprechende Reparaturen eingeleitet werden können.

In einer weiteren möglichen Ausführungsform weist die Alarmeinrichtung eine Speichereinheit zur Speicherung der Informationen auf, wobei die Informationen von mindestens einer Zieladresse abrufbar sind und/oder abgerufen werden. Insbesondere unterstützt die Alarmeinrichtung eine Pull-Funktion, bei der die Alarmeinrichtung selbst passiv bleibt und aktiv von extern auf die Informationen zugegriffen wird. Beispielsweise können die mindestens einen oder weitere Zieladressen zu beliebigen Zeitpunkten und/oder in festen Zeitintervallen den einrichtungsspezifischen Zustand, insbesondere die Funktionsparameter der Alarmeinrichtung, abfragen und sich so über einen Funktionsstatus informieren. Alternativ oder zusätzlich ist der umgebungsspezifische Zustand, insbesondere die Umgebungsparameter, abrufbar.

Denkbar ist, dass die Informationen Alarmsignale oder Entwarnungssignale umfassen. Vorzugsweise umfassen die Alarmsignale konkrete Hinweise auf die Gefahrensituation. In der Ausbildung der Alarmeinrichtung als Rauch- und/oder Brandmelder liegt beispielsweise eine Gefahrensituation vor, wenn die Sensoreinheit eine erhöhte Rauchpartikelkonzentration in der Umgebung des Rauchmelders erfasst und die Auswerteeinheit einen Brand erkennt. Entwarnungssignale umfassen insbesondere konkrete Hinweise auf die Normalsituation. In der Normalsituation erfasst die Sensoreinheit, z.B. in der Ausbildung der Alarmeinrichtung als Rauch- und/oder Brandmelder, eine Gas- und/oder Partikelkonzentration, bei der die Auswerteeinheit keinen Brand erkennt.

Optional umfassen die Informationen ein oder mehrere Statusprotokolle. Vorzugsweise beinhalten die Statusprotokolle Funktions- und/oder

Servicesignale der Alarmeinrichtung. Insbesondere kann es sich dabei beispielsweise um einen Hinweis auf einen schwachen Batteriestatus oder einer defekten Warnleuchte der Alarmeinrichtung handeln.

Eine mögliche Ausgestaltung der Erfindung sieht vor, dass der Zugang zum öffentlichen Internet über das Mobilfunknetz erfolgt. Mögliche Mobilfunknetze sind beispielsweise GSM, GPRS oder UMTS. Vorzugsweise werden in dieser Weiterbildung keine weiteren Kommunikationsschnittstellen oder Zusatzgeräte, insbesondere das WLAN- Modul, benötigt.

Ein anderer Gegenstand der Erfindung betrifft eine Alarmanlage mit einer Empfangsstation und mit mindestens einer Alarmeinrichtung nach einem der vorhergehenden Ansprüche, wobei die Empfangsstation eine Kopplung mit dem Internet aufweist. Vorzugsweise ist die Empfangsstation als ein WLAN-Router ausgebildet. Insbesondere weist die Alarmanlage mehrere Alarmeinrichtungen auf, die untereinander und mit der Empfangsstation über WLAN verbunden sind.

Beispielsweise können die Alarmeinrichtungen und die Empfangsstation innerhalb eines weitläufigen Gebäudekomplexes an unterschiedlichen Orten angeordnet sein. Ein Alarmsignal einer Alarmeinrichtung, die in einem Gebäudeabschnitt angeordnet ist, wird dann an die anderen Alarmeinrichtungen und an die Empfangsstation weitergeleitet. So wird es ermöglicht, dass Personen auch über weite Strecken und/oder am anderen Ende des Gebäudekomplexes über die Gefahrensituation informiert werden können. Nahezu zeitgleich werden die Informationen durch die mit dem Internet verbundene Empfangsstation an die Zieladressen übermittelt.

Denkbar ist ebenfalls, dass eine Person in einem Raum des Gebäudekomplexes eine Rücksetzmeldung von einer Alarmeinrichtung absetzt und somit über die WLAN-Verbindung auch alle weiteren Alarmeinrichtungen im Gebäudekomplex rücksetzen kann. Optional kann die Rücksetzmeldung über die Kopplung der Empfangsstation mit dem Internet an die oder weitere Zieladressen übermittelt werden.

Es versteht sich, dass die Alarmanlage und/oder die Alarmeinrichtungen auch passiv bleiben können, also die Pull-Funktion unterstützen, und die oder weitere Zieladressen die Informationen über die Kopplung mit dem Internet abrufen.

Weitere Merkmale, Vorteile und Wirkungen der Erfindung ergeben sich aus der nachfolgenden Beschreibung bevorzugter Ausführungsbeispiele der Erfindung, sowie den beigefügten Figuren. Dabei zeigen:

| | |
|---|---|
| Figur 1 | eine Strukturdarstellung einer Alarmeinrichtung als ein Ausführungsbeispiel der Erfindung; |
| Figur 2 | einen Übertragungsweg der Informationen der Alarmeinrichtung aus Fig. 1; |
| Figur 3 | einen alternativen Übertragungsweg zur Darstellung aus Fig. 2 |
| Figur 4 | Übermittlungsmöglichkeiten der Informationen der Alarmeinrichtung aus Fig. 1 |
| Figur 5 | Alarmanlage mit drei Alarmeinrichtungen nach Fig. 1 und einer Empfangstation. |

Einander entsprechende oder gleiche Teile sind in den Figuren jeweils mit gleichen Bezugszeichen versehen.

Ein bevorzugtes Ausführungsbeispiel der Erfindung ist in der Fig. 1 gezeigt, in der eine Blockdarstellung einer Alarmeinrichtung 1 dargestellt ist. Die Alarmeinrichtung 1 ist als ein batteriebetriebener Rauchmelder ausgebildet und ist in einem Gehäuse 2 integriert, das zu einer Decken- oder Wandmontage ausgebildet ist. Das Gehäuse 2 weist eine Außen- und eine Innenseite auf, wobei die Außenseite für Personen in der Umgebung der Alarmeinrichtung 1 sichtbar angeordnet ist.

Die Alarmeinrichtung 1 umfasst eine Kommunikationsschnittstelle 3 und eine Konfigurationsschnittstelle 4, wobei die Konfigurationsschnittstelle 4 von der

Außenseite des Gehäuses 2 zugänglich angeordnet ist. Des Weiteren umfasst die Alarmeinrichtung 1 eine Sensoreinheit 5, eine Auswerteeinheit 6, eine Speichereinheit 7, eine Steuereinheit 8, eine Signaleinheit 9 und einen elektronischen Schalter 10. Die Signaleinheit 9 umfasst eine Warnleuchte und einen Alarmtongenerator und ist an der Außenseite des Gehäuses 2 angeordnet.

Die Kommunikationsschnittstelle 3 ist als eine WLAN- Schnittstellerealisiert, die dazu ausgebildet ist, einen Zugang und/oder eine Verbindung zwischen der Alarmeinrichtung 1 und dem öffentlichen Internet A herzustellen. Die Verbindung kann beispielsweise über einen nicht-dargestellten WLAN-Router erfolgen.

In einem alternativen Ausführungsbeispiel der Erfindung ist die Kommunikationsschnittstelle 3 als eine Mobilfunkschnittstelle ausgebildet, über die die Verbindung zum öffentlichen Internet A hergestellt wird. Möglich ist auch eine doppelte Schnittstelle, die sowohl eine Mobilfunknetz- als auch eine WLAN-Funktion bereitstellt.

Die Steuereinheit 8 steuert den elektronischen Schalter 10 an, um eine Stromversorgung der Alarmeinrichtung 1 mit einer Batterie zu aktivieren und diese von einem Ruhezustand in einen Übertragungszustand zu versetzen.

Die Konfigurationsschnittstelle 4 ist als eine USB- Schnittstelle ausgebildet und zur Übertragung von Übertragungsmodalitäten C geeignet. Die Konfigurationsschnittstelle 4 ermöglicht einen Anschluss eines Rechners, mit dem als Übertragungsmodalitäten u.a. Zieladressen B und Verbindungs- und Verschlüsselungsdaten der Internetverbindung eingestellt werden können.

Die Sensoreinheit 5 ist zur Erfassung von Umgebungsparametern, die auf einen umgebungsspezifischen Zustand D hinweisen. Zu den Umgebungsparametern zählt u. a. eine erhöhte Rauchpartikelkonzentration in einer Umgebungsluft, eine erhöhte Temperatur, eine optische Emission von Flammen oder Glut, die auf einen Brand hinweisen.

Die Alarmeinrichtung 1 erfasst Funktionsparameter, die einen einrichtungsspezifischen Zustand E angeben. Die Funktionsparameter umfassen

z.B. einen schwacher Batteriestatus der Alarmeinrichtung 1, der auf einen Servicezustand hinweist.

Die Auswerteeinheit 6 ist zur Auswertung der umgebungs- und einrichtungsspezifischen D; E Zustände ausgebildet. Sie erkennt Ereignisfälle F, wie z.B. eine Gefahren- oder Normalsituation und/oder ob ein Wartungs- oder Reparaturservice für die Alarmeinrichtung 1 nötig ist.

Die Speichereinheit 7 speichert Informationen G über die von der Auswerteeinheit 6 erkannten Ereignisfälle F. Die Informationen G umfassen Alarmsignale, Entwarnungssignale und/oder Statusprotokolle. Die Statusprotokolle weisen Signale auf, die eine Funktionsfähigkeit der Alarmeinrichtung 1 angeben. So enthalten die Statusprotokolle z.B. Funktions- und/oder Servicesignale der Alarmeinrichtung 1.

Wertet die Auswerteeinheit 6 einen umgebungsspezifischen Zustand aus, der auf einen Brand hinweist, so speichert die Speichereinheit 7 ein Alarmsignal. Weist der umgebungsspezifische Zustand auf eine Normalsituation hin, so speichert die Speichereinheit ein Entwarnungssignal. Bei der Auswertung der einrichtungsspezifischen Zustände, die z.B. auf einen schwachen Batteriestand oder auf eine Beeinträchtigung der Sensoreinheit 5 durch Verschmutzung hinweisen, speichert die Speichereinheit 7 ein Statusprotokoll mit Servicesignalen. Dahingegen enthält das Statusprotokoll Funktionssignale, wenn die Alarmeinrichtung 1 in ihrer Funktion nicht beeinträchtigt ist und problemlos arbeitet.

Die Steuereinheit 8 ist zur Ansteuerung der Signaleinheit 9 ausgebildet. Erkennt die Auswerteeinheit 6 eine Gefahrensituation, wie z.B. eine verstärkte Rauchentwicklung in der Umgebungsluft, so steuert die Steuereinheit 8 die Signaleinheit 9 an, so dass die Warnleuchte aufleuchtet und der Alarmton ertönt.

Die Steuereinheit 8 steuert nahezu zeitgleich zur Signaleinheit 9 die Kommunikationsschnittstelle 3 an, um die Verbindung zum Internet A zu aktivieren und die Informationen G an die Zieladressen B zu übertragen.

Fig. 2 zeigt einen Übertragungsweg der Informationen G der Alarmeinrichtung 1 aus Fig. 1. Die Alarmeinrichtung 1 ist über die Kommunikationsschnittstelle 3 mit dem öffentlichen Internet A verbunden und überträgt die Informationen G in dem Ereignisfall F aktiv an die konfigurierten Zieladressen B. Die Alarmeinrichtung 1 setzt dabei eine Push-Funktion um, da sie die Informationen G selbstständig an die Zieladressen B versendet.

Fig. 3 zeigt einen alternativen Übertragungsweg der Informationen G der Alarmeinrichtung 1 aus Fig. 1. Die Alarmeinrichtung 1 ist über die Kommunikationsschnittstelle 3 mit dem Internet A verbunden. Die Zieladressen B rufen z.B. turnusmäßig die gespeicherten Informationen G der Alarmeinrichtung 1 ab, wobei die Alarmeinrichtung 1 selbst passiv bleibt und eine Pull-Funktion unterstützt. Durch die Pull-Funktion haben die Zieladressen B Zugriff auf die Informationen G.

Fig. 4 zeigt weitere Übermittlungsmöglichkeiten der Informationen G der Alarmeinrichtung 1 aus Fig. 1. Die Kommunikationsschnittstelle 3 ist dazu ausgebildet, die Informationen G über das Internet A auf einen Server der Zieladressen B zu übermitteln. Entsprechend der Konfigurationseinstellungen werden die Informationen G als eine E-Mail H, eine SMS K und/oder ein Voice-Mail L ausgegeben. Die E-Mail H und die SMS K werden auf einem Bildschirm eines Computers oder eines mobilen Gerätes, wie z.B. eines Mobiltelefons, ausgegeben. Die Voice- Mail L erfolgt üblicherweise auf einen Telefonanschluss, insbesondere einen Festnetzanschluss.

Fig. 5 zeigt eine Alarmanlage 11, die drei Alarmeinrichtungen 1a; 1b; 1c und eine Empfangsstation 12 umfasst. Die Alarmeinrichtungen 1 sind über WLAN untereinander und mit der Empfangsstation 12 verbunden. Die Empfangsstation 12 ist als WLAN-Router ausgebildet und stellt eine Kopplung der Alarmeinrichtungen 1 mit dem öffentlichen Internet A her, wodurch die Push- und/oder Pull-Funktion der Alarmeinrichtung 1 bereitgestellt wird.

Ansprüche

1. Alarmeinrichtung (1) zur Erkennung und Mitteilung von umgebungs- und/oder einrichtungsspezifischen Zuständen,

   mit einer Kommunikationsschnittstelle (3) zur kabellosen Übertragung von Informationen (G) an eine oder mehrere Zieladressen (B),

   dadurch gekennzeichnet, dass

   die Kommunikationsschnittstelle programmtechnisch und/oder schaltungstechnisch ausgebildet ist, einen Zugang zum öffentlichen Internet (A) herzustellen und/oder aufrechtzuerhalten, um die Informationen (G) an die eine oder mehrere Zieladressen (B) zu übertragen.

2. Alarmeinrichtung (1) nach Anspruch 1, dadurch gekennzeichnet, dass die Alarmeinrichtung (1) als ein Rauch- und/oder Brandmelder in einem Gehäuse (2), insbesondere zur Decken- oder Wandmontage, ausgebildet ist.

3. Alarmeinrichtung (1) nach Anspruch 1 oder 2, dadurch gekennzeichnet, dass die Kommunikationsschnittstelle (3) als eine WLAN-Schnittstelle und/oder als eine Mobilfunkschnittstelle ausgebildet ist.

4. Alarmeinrichtung (1) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, dass die Übertragung der Informationen (G) als eine E-Mail (H), SMS (K) und/oder als ein Voice-Mail (L) erfolgt.

5. Alarmeinrichtung (1) nach einem der vorhergehenden Ansprüche, gekennzeichnet durch eine Konfigurationsschnittstelle (4) zur Übermittlung von Übertragungsmodalitäten (C).

6. Alarmeinrichtung (1) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet dass die Alarmeinrichtung (1) zur aktiven

Übermittlung der Informationen (G) an mindestens eine Zieladresse (B) ausgebildet ist.

7. Alarmeinrichtung (1) nach einem der vorhergehenden Ansprüche, gekennzeichnet durch eine Speichereinheit (7) zur Speicherung der Informationen (G), wobei die Informationen (G) von mindestens einer Zieladresse (B) abrufbar sind und/oder abgerufen werden.

8. Alarmeinrichtung (1) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet dass die Informationen (G) Alarmsignale und/oder Entwarnungssignale umfassen.

9. Alarmeinrichtung (1) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, dass die Informationen (G) ein oder mehrere Statusprotokolle umfassen.

10. Alarmeinrichtung (1) nach Anspruch 9, dadurch gekennzeichnet, dass die Statusprotokolle Funktions- und/oder Servicesignale der Alarmeinrichtung (1) umfassen.

11. Alarmeinrichtung (1) nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, dass der Zugang zum öffentlichen Internet (A) über ein Mobilfunknetz erfolgt.

12. Alarmanlage (11) mit mindestens einer Alarmeinrichtung (1) nach einem der vorhergehenden Ansprüche und mit einer Empfangsstation (12), wobei die Empfangsstation (12) eine Kopplung mit dem öffentlichen Internet (A) und/oder dem Mobilfunknetz aufweist.

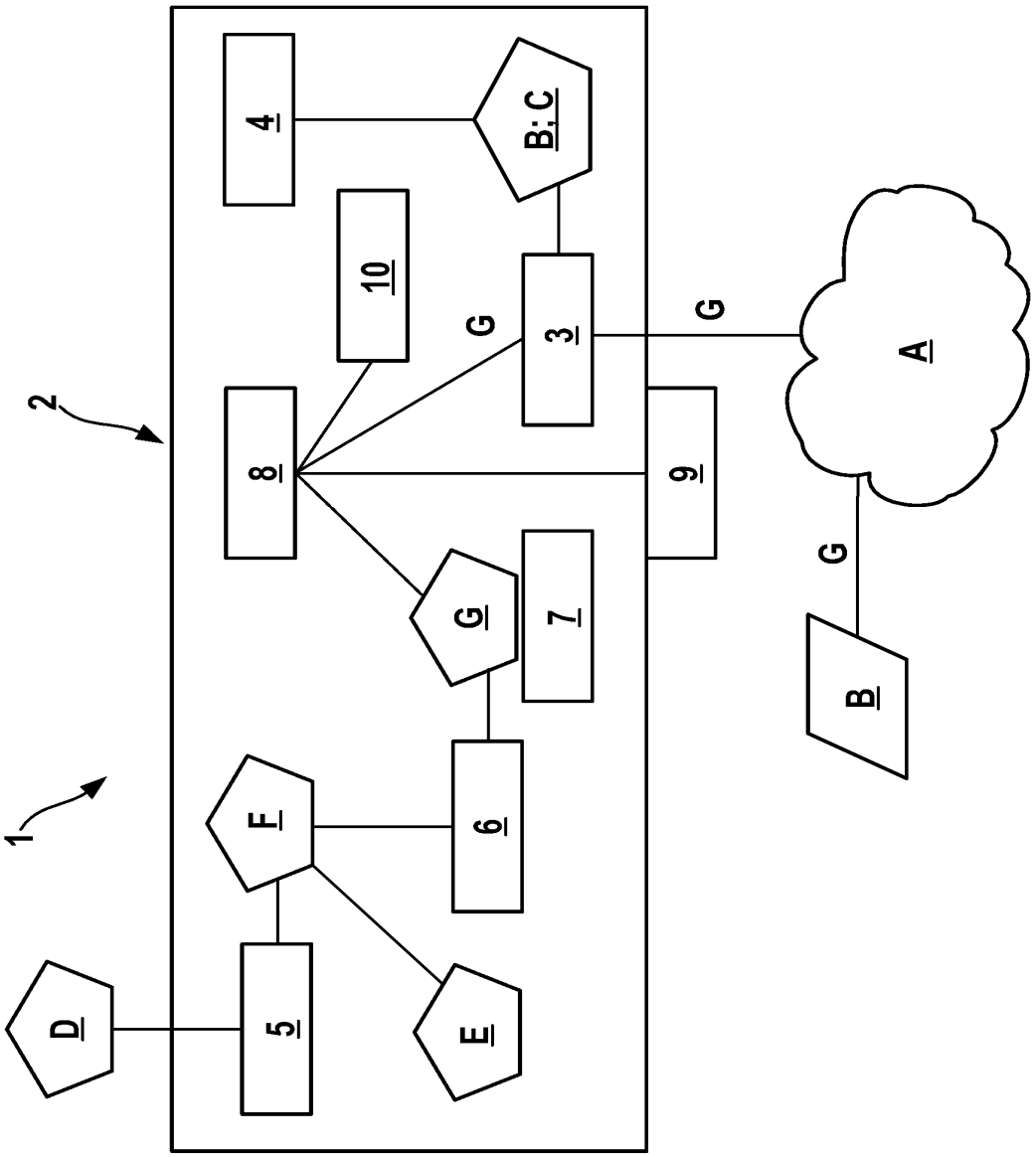



Fig. 1

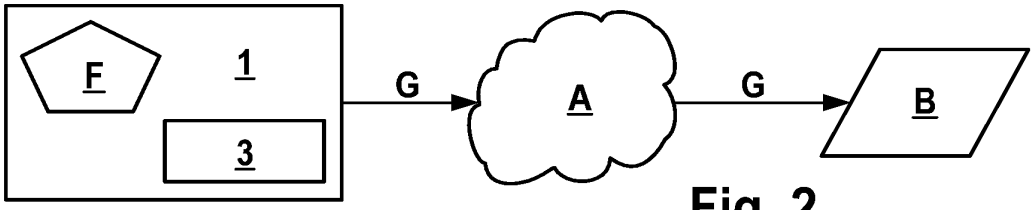



Fig. 2

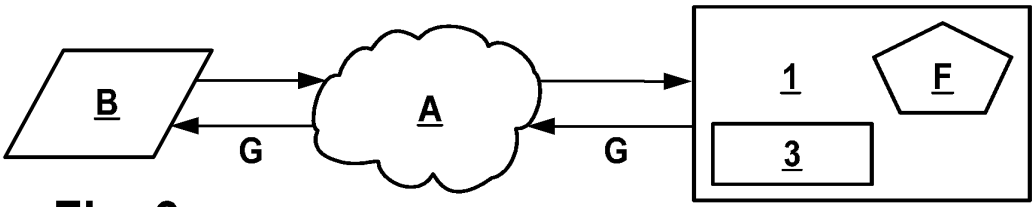



Fig. 3

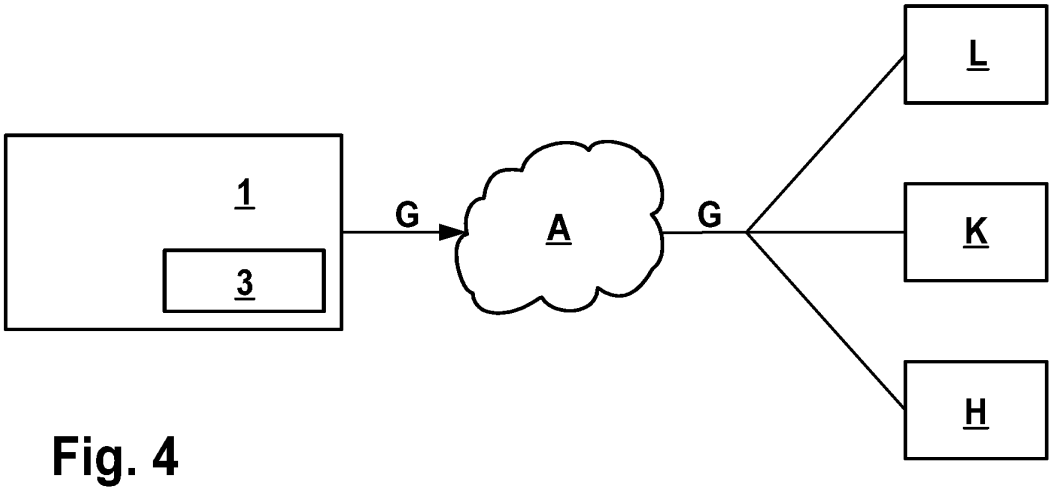



Fig. 4

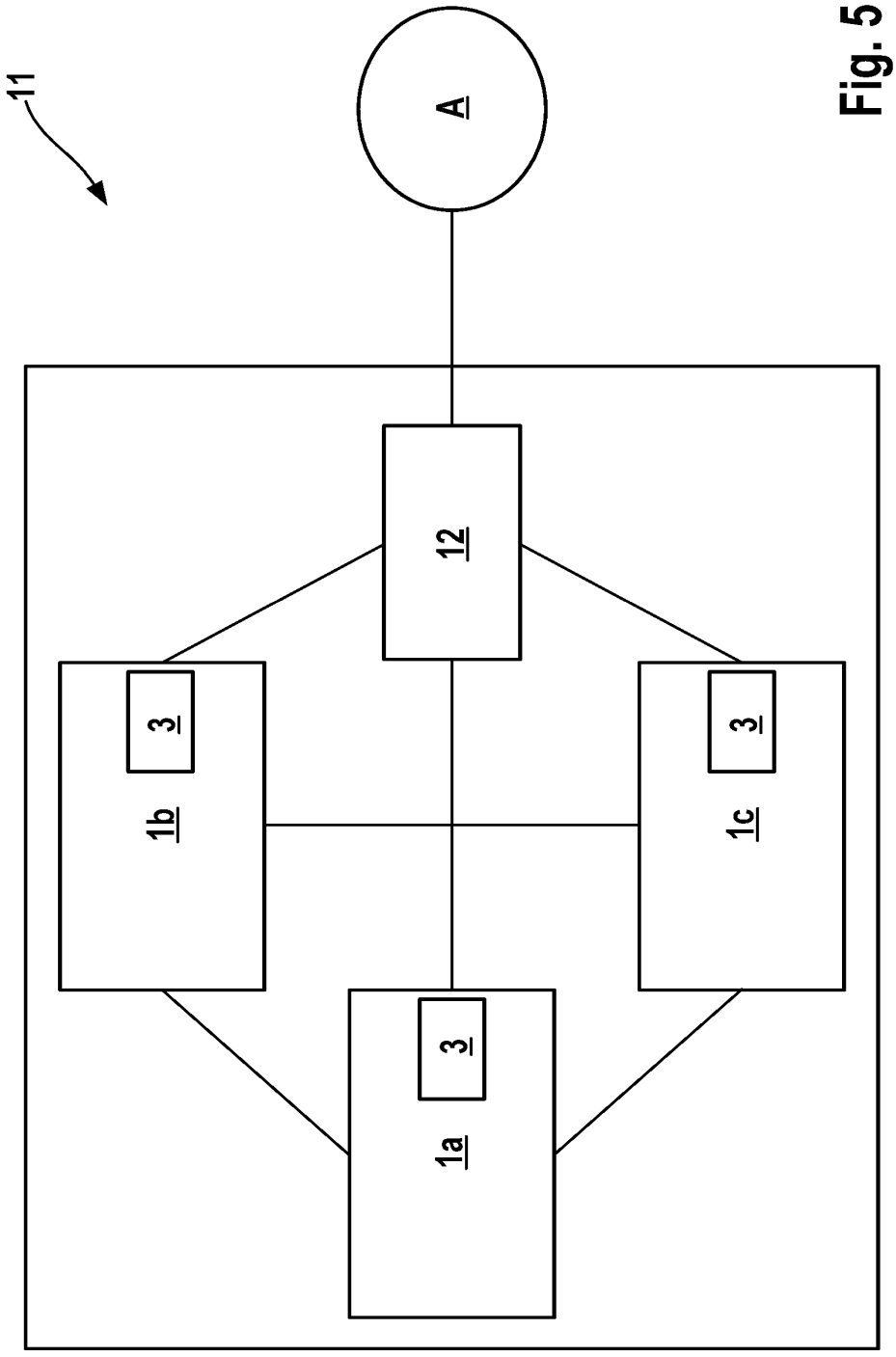



Fig. 5

# INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2010/062722

**A. CLASSIFICATION OF SUBJECT MATTER**
INV. G08B25/10
ADD.

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)
G08B

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 practical, search terms used)
EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| X | US 2007/063833 A1 (KATES LAWRENCE [US])<br>22 March 2007 (2007-03-22)<br>* abstract<br>figures 1-10<br>page 1, paragraph 6<br>page 2, paragraph 26<br>page 3, paragraphs 27,29,35<br>page 4, paragraph 35 | 1-12 |
| X | WO 01/37589 A1 (TRIGUARD GROUP LLC [US];<br>LAYTON PAMELA G [US]; CRAWFORD KEITH D<br>[US];) 25 May 2001 (2001-05-25)<br>* abstract<br>figures 1-12<br>page 12, paragraphs 10,11<br>page 13, paragraph 1-3<br>page 16, paragraph 2<br>page 19, paragraph 1 | 1-12 |

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

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"O" document referring to an oral disclosure, use, exhibition or other means

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"&" 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 October 2010 | 27/10/2010 |

| Name and mailing address of the ISA/ | Authorized officer |
|---|---|
| European Patent Office, P.B. 5818 Patentlaan 2<br>NL - 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040,<br>Fax: (+31-70) 340-3016 | Coffa, Andrew |

Form PCT/ISA/210 (second sheet) (April 2005)

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2010/062722

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---|---|---|
| US 2007063833 A1 | 22-03-2007 | AU 2006292764 A1 | 29-03-2007 |
| | | CA 2623003 A1 | 29-03-2007 |
| | | CN 101292273 A | 22-10-2008 |
| | | EP 1927090 A1 | 04-06-2008 |
| | | JP 2009509237 T | 05-03-2009 |
| | | KR 20080045293 A | 22-05-2008 |
| | | US 2007229237 A1 | 04-10-2007 |
| | | WO 2007035219 A1 | 29-03-2007 |
| WO 0137589 A1 | 25-05-2001 | AU 1621401 A | 30-05-2001 |
| | | US 6829478 B1 | 07-12-2004 |

# INTERNATIONALER RECHERCHENBERICHT

Internationales Aktenzeichen
PCT/EP2010/062722

**A. KLASSIFIZIERUNG DES ANMELDUNGSGEGENSTANDES**
INV. G08B25/10
ADD.

*Nach der Internationalen Patentklassifikation (IPC) oder nach der nationalen Klassifikation und der IPC*

**B. RECHERCHIERTE GEBIETE**

Recherchierter Mindestprüfstoff (Klassifikationssystem und Klassifikationssymbole )
G08B

Recherchierte, aber nicht zum Mindestprüfstoff gehörende Veröffentlichungen, soweit diese unter die recherchierten Gebiete fallen

Während der internationalen Recherche konsultierte elektronische Datenbank (Name der Datenbank und evtl. verwendete Suchbegriffe)
EPO-Internal

**C. ALS WESENTLICH ANGESEHENE UNTERLAGEN**

| Kategorie* | Bezeichnung der Veröffentlichung, soweit erforderlich unter Angabe der in Betracht kommenden Teile | Betr. Anspruch Nr. |
|---|---|---|
| X | US 2007/063833 A1 (KATES LAWRENCE [US])<br>22. März 2007 (2007-03-22)<br>* Zusammenfassung<br>Abbildungen 1-10<br>Seite 1, Absatz 6<br>Seite 2, Absatz 26<br>Seite 3, Absätze 27,29,35<br>Seite 4, Absatz 35<br>----- | 1-12 |
| X | WO 01/37589 A1 (TRIGUARD GROUP LLC [US]; LAYTON PAMELA G [US]; CRAWFORD KEITH D [US];) 25. Mai 2001 (2001-05-25)<br>* Zusammenfassung<br>Abbildungen 1-12<br>Seite 12, Absätze 10,11<br>Seite 13, Absatz 1-3<br>Seite 16, Absatz 2<br>Seite 19, Absatz 1<br>----- | 1-12 |

☐ *Weitere Veröffentlichungen sind der Fortsetzung von Feld C zu entnehmen* ☒ *Siehe Anhang Patentfamilie*

* Besondere Kategorien von angegebenen Veröffentlichungen :
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| Datum des Abschlusses der internationalen Recherche | Absendedatum des internationalen Recherchenberichts |
|---|---|
| 18. Oktober 2010 | 27/10/2010 |
| **Name und Postanschrift der Internationalen Recherchenbehörde**<br>Europäisches Patentamt, P.B. 5818 Patentlaan 2<br>NL – 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040,<br>Fax: (+31-70) 340-3016 | **Bevollmächtigter Bediensteter**<br>Coffa, Andrew |

Formblatt PCT/ISA/210 (Blatt 2) (April 2005)

## INTERNATIONALER RECHERCHENBERICHT

Angaben zu Veröffentlichungen, die zur selben Patentfamilie gehören

Internationales Aktenzeichen
PCT/EP2010/062722

| Im Recherchenbericht angeführtes Patentdokument | Datum der Veröffentlichung | Mitglied(er) der Patentfamilie | Datum der Veröffentlichung |
|---|---|---|---|
| US 2007063833 A1 | 22-03-2007 | AU 2006292764 A1 | 29-03-2007 |
| | | CA 2623003 A1 | 29-03-2007 |
| | | CN 101292273 A | 22-10-2008 |
| | | EP 1927090 A1 | 04-06-2008 |
| | | JP 2009509237 T | 05-03-2009 |
| | | KR 20080045293 A | 22-05-2008 |
| | | US 2007229237 A1 | 04-10-2007 |
| | | WO 2007035219 A1 | 29-03-2007 |
| WO 0137589 A1 | 25-05-2001 | AU 1621401 A | 30-05-2001 |
| | | US 6829478 B1 | 07-12-2004 |

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 15657163 |
| **Filing Date:** | 23-Jul-2017 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |

Filed as Small Entity

**Filing Fees for Utility under 35 USC 111(a)**

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| Extension - 3 months with $0 paid | 2253 | 1 | 740 | 740 |
| **Miscellaneous:** | | | | |
| RCE- 2ND AND SUBSEQUENT REQUEST | 2820 | 1 | 1000 | 1000 |
| | | **Total in USD ($)** | | **1740** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 43278050 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 18-JUL-2021 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 07:25:26 |
| **Application Type:** | Utility under 35 USC 111(a) |

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| Submitted with Payment | yes |
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| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Request for Continued Examination (RCE) | sb0030-RCE.pdf | 1349944<br>d2d405ed8a5c7a8b7e03bd3385bd5cf30fbd8033 | no | 3 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Amendment Submitted/Entered with Filing of CPA/RCE | RCE-Response-to-FOA.pdf | 53084<br>f2df5afe58a75ae65eacad06ec98ef8f4c3683e1 | no | 10 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Extension of Time | 0022-Extensions.pdf | 165685<br>e130279e534865e1b739811c3ac994caf2f6e98d | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 4 | Information Disclosure Statement (IDS) Form (SB08) | IDS14.pdf | 1035521<br>16a3a2432493d7143e0ac96bb16515ae8c7f9f0d | no | 6 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 5 | Foreign Reference | WO2011051022.pdf | 889560<br>ea79986e2c8d4a366675205684 99f463a0dc5b36 | no | 23 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 6 | Fee Worksheet (SB06) | fee-info.pdf | 32176<br>30b3ded50495ff6727880ebcfcfe916f25b3425f | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |

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**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

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Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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# REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
## (Submitted Only via EFS-Web)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Application Number | 15/657,163 | Filing Date | 2017-07-23 | Docket Number (if applicable) | BINDER-014-US3 | Art Unit | 2456 |
| First Named Inventor | Yehuda Binder | | | Examiner Name | Khan, Hassan A. | | |

**This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.**
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

### SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

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☒ Amendment/Reply

☒ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other _____

### MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

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|---|---|---|---|
| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2021-07-16 |
| Name | BINDER Yehuda | Registration Number | 73612 |

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

# Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/AIA/22 (10-20)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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| **PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)** | Docket Number (Optional) BINDER-014-US3 |
|---|---|
| Application Number 15/657,163 | Filed 2017-07-23 |
| For SYSTEM AND METHOD FOR SERVER BASED CONTROL | |
| Art Unit 2456 | Examiner KHAN, HASSAN ABDUR-RAHMAN |

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

| | Fee | Small Entity Fee | Micro Entity Fee | |
|---|---|---|---|---|
| ☐ One month (37 CFR 1.17(a)(1)) | $220 | $110 | $55 | $ |
| ☐ Two months (37 CFR 1.17(a)(2)) | $640 | $320 | $160 | $ |
| ☑ Three months (37 CFR 1.17(a)(3)) | $1,480 | $740 | $370 | $ 740 |
| ☐ Four months (37 CFR 1.17(a)(4)) | $2,320 | $1,160 | $580 | $ |
| ☐ Five months (37 CFR 1.17(a)(5)) | $3,160 | $1,580 | $790 | $ |

☑ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 506726.

☐ Payment made via EFS-Web.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 73612.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

| /Yehuda Binder/ | July 16, 2021 |
|---|---|
| Signature | Date |
| Yehuda BINDER | -972-544444577 |
| Typed or printed name | Telephone Number |

**NOTE:** This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

# Privacy Act Statement

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

ATTY.'S DOCKET: BINDER-014-US3

| | | |
|---|---|---|
| In re Application of: | ) | Confirmation No. 1088 |
| | ) | |
| Yehuda BINDER | ) | Art Unit: 2456 |
| | ) | |
| Appln. No.: 15/657,163 | ) | Examiner: Khan, Hassan A. |
| | ) | |
| Filed: July 23, 2017 | ) | Washington, D.C. |
| | ) | |
| For: System and method for Server-based control | ) | July 16, 2021 |
| | ) | |

**AMENDMENT:**

Honorable Commissioner for Patents
U.S. Patent and Trademark Office
Randolph Building, Mail Stop Amendments
401 Dulany Street
Alexandria, VA 22314

Sir:

In response to the examiner's action dated February 1, 2021 (hereinafter the "**Action**"), kindly amend the above-identified application as follows:

**Amendments** to the Claims appear in the Listing of Claims that begins on page **2** of this paper, and

**Remarks / Comments** begin on page **8** of this paper.

**Amendments to the claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for operating multiple actuators ~~in a controlled device~~ in response to captured human voice data, for use with a client device and a controlled device in a building, each communicating over a wireless network, and for use with an Internet-connected server device external to the building, the method comprising:

capturing, by a microphone in the client device, a first human voice data;

sending to the server, by the client device via the wireless network, the captured first human voice data;

receiving, by the server over the Internet, the captured first human voice data;

processing, by the server, the captured first human voice data;

responsive to the processing, sending a first message, by the server to the ~~controlled device~~ client device over the Internet;

receiving, by the ~~controlled device~~ client device via the wireless network, the first message;

operating a first actuator in the ~~controlled device~~ client device in response to the received first message;

capturing, by ~~a~~ the microphone in the client device, a second human voice data;

sending to the server, by the client device via the wireless network, the captured second human voice data;

receiving, by the server over the Internet, the captured second human voice data;

processing, by the server, the captured second human voice data;

responsive to the processing, sending a second message, by the server to the controlled device over the Internet;

receiving, by the controlled device via the wireless network, the second message; and

operating a second actuator in the controlled device in response to the received second message.

2. (Cancelled)

3. (Original) The method according to claim 1, wherein the processing comprises performing a voice recognition algorithm for identifying the voice of a specific person.

4. (Previously presented) The method according to claim 1, wherein the client device further comprises a sensor that outputs sensor data that responds to a physical phenomenon, wherein the method further comprising sending to the server, by the client device via the wireless network, the sensor data, and wherein the first message is sent by the server in response to the sensor data.

5. (Previously presented) The method according to claim 4, wherein the sensor is a thermoelectric sensor that responds to a temperature or to a temperature gradient of an object using conduction, convection, or radiation, or wherein the sensor is a photoelectric sensor that responds to a visible or an invisible light or gamma rays.

6. (Previously presented) The method according to claim 1, wherein each of the first and second actuators is directly or indirectly affecting, changing, producing, or creating a physical phenomenon.

7. (Original) The method according to claim 6, wherein the physical phenomenon comprises temperature, humidity, pressure,

audio, vibration, light, motion, sound, proximity, flow rate, electrical voltage, or electrical current.

8. (Original) The method according to claim 1, wherein the client device comprises multiple microphones, and wherein the capturing comprises capturing, by the multiple microphones in the client device, the human voice data.

9. (Original) The method according to claim 8, wherein the multiple microphones are arranged as a directional microphones array operative to estimate a number, magnitude, frequency, Direction-Of-Arrival (DOA), distance, or speed of a phenomenon impinging the microphones array.

10. (Previously Presented) The method according to claim 1, wherein the microphone is an omnidirectional, unidirectional, or bidirectional microphone that is based on the sensing an incident sound-based motion of a diaphragm or a ribbon, or wherein the microphone comprises a condenser, an electret, a dynamic, a ribbon, a carbon, or a piezoelectric microphone.

11. (Previously presented) The method according to claim 1, wherein the client device or the controlled device are addressable in the wireless network or the Internet using an address stored in a volatile or non-volatile memory of the respective device for uniquely identifying the respective device in the network.

12. (Previously presented) The method according to claim 11, wherein the address is a Media Access Control (MAC) layer address that is MAC-48, Extended Unique Identifier (EUI) EUI-48, or EUI-64 address type or wherein the address is a layer 3 address and is static or dynamic Internet Protocol (IP) address that is IPv4 or IPv6 type address.

13. (Previously presented) The method according to claim 1, wherein the wireless network is a Wireless Personal Area Network (WPAN), that is according to, or based on, Bluetooth™

or Institute of Electrical and Electronics Engineers (IEEE) 802.15.1-2005 standards, or wherein the WPAN is a wireless control network that is according to, or based on, Zigbee™, IEEE 802.15.4-2003, or Z-Wave™ standards.

14. (Previously presented) The method according to claim 1, wherein the wireless network is a Wireless Local Area Network (WLAN) that is according to, or base on, IEEE 802.11-2012, IEEE 802.11a, IEEE 802.11b, Institute of Electrical and Electronics Engineers (IEEE) IEEE 802.11g, IEEE 802.11n, or IEEE 802.11ac.

15. (Original) The method according to claim 1, wherein the wireless network uses a wireless communication over a licensed or an unlicensed radio frequency band, that is an Industrial, Scientific and Medical (ISM) radio band.

16. (Previously presented) The method according to claim 1, wherein the wireless network is a cellular telephone network that is a Third Generation (3G) network that uses Universal Mobile Telecommunications System (UMTS), Wideband Code Division Multiple Access (W-CDMA) UMTS, High Speed Packet Access (HSPA), UMTS Time-Division Duplexing (TDD), CDMA2000 1xRTT, Evolution - Data Optimized (EV-DO), or Global System for Mobile communications (GSM), Enhanced Data rates for GSM Evolution (EDGE) EDGE-Evolution, or wherein the cellular telephone network is a Fourth Generation (4G) network that uses Evolved High Speed Packet Access (HSPA+), Mobile Worldwide Interoperability for Microwave Access (WiMAX), Long-Term Evolution (LTE), LTE-Advanced, Mobile Broadband Wireless Access (MBWA), or is based on IEEE 802.20-2008.

17. (Currently amended) The method according to claim 1, wherein ~~the client device or~~ the controlled device is integrated in, is part of, or is entirely included in, an appliance.

18. (Original) The method according to claim 17, wherein the primary functionality of the appliance is associated with food storage, handling, or preparation.

19. (Original) The method according to claim 18, wherein the primary function of the appliance is heating food, and wherein the appliance is a microwave oven, an electric mixer, a stove, an oven, or an induction cooker.

20. (Currently amended) The method according to claim 18, wherein the appliance is a refrigerator, a freezer, a food processor, a dishwasher~~s~~, a food blender, a beverage maker, a coffeemaker, or an iced-tea maker.

21. (Previously presented) The method according to claim 17, wherein the primary function of the appliance is associated with environmental control, and the appliance is part of an Heating, Ventilation and Air Conditioning (HVAC) system.

22. (Original) The method according to claim 21, wherein the primary function of the appliance is associated with temperature control, and wherein the appliance is an air conditioner or a heater.

23. (Previously presented) The method according to claim 17, wherein the primary function of the appliance is associated with cleaning, wherein the appliance primary function is associated with clothes cleaning and the appliance is a washing machine, or wherein the appliance is a vacuum cleaner.

24. (Previously presented) The method according to claim 17, wherein the appliance is an answering machine, a telephone set, a home cinema system, a High Fidelity (HiFi) system, a Compact Disc (CD) or Digital Video Disc (DVD) player, an electric furnace, a trash compactor, a smoke detector, a light fixture, or a dehumidifier.

25. (Previously presented) The method according to claim 1, wherein the first actuator is an electric light source for



Amazon EX1004 Page 126

converting electrical energy into light that emits visible or non-visible light for illumination or indication, and the non-visible light is infrared, ultraviolet, X-rays, or gamma rays.

26. (Previously Presented) The method according to claim 25, wherein the electric light source comprises a lamp, an incandescent lamp, a gas discharge lamp, a fluorescent lamp, a Solid-State Lighting (SSL), a Light Emitting Diode (LED), an Organic LED (OLED), a polymer LED (PLED), or a laser diode.

27. (Previously presented) The method according to claim 1, wherein the first actuator is a motion actuator that causes linear or rotary motion.

28. (Previously presented) The method according to claim 1, wherein the first actuator is a sounder for converting an electrical energy to omnidirectional, unidirectional, or bidirectional pattern emitted, audible or inaudible, sound waves.

29. (Previously presented) The method according to claim 28, wherein the sounder comprises an electromagnetic loudspeaker, a piezoelectric speaker, an electrostatic loudspeaker (ESL), a ribbon or planar magnetic loudspeaker, or a bending wave loudspeaker, or wherein the sounder comprises an electric bell, a buzzer, a chime, a whistle, or a ringer.

30. (Previously presented) The method according to claim 28, wherein the operating of the first actuator comprises playing digital audio content that is pre-recorded or synthesized, or wherein the operating of the first actuator comprises simulating the voice of a human being or generating music, or wherein the operating of the first actuator comprises sounding a syllable, a word, a phrase, a sentence, a short story, or a long story, using male or female voice.

**REMARKS / COMMENTS**

The claims are amended for better form and clarity, and to better define over the prior art.

Office Action, section 4 pages 4-17

Claims 1-30 are rejected under pre-AIA 35 U.S.C. 103 as being unpatentable over Beliles *et al.* (US 2007/0283005 - hereinafter "Beliles"), in view of Buck *et al.* (US 2009/0089065 - hereinafter "Buck"), and in view of Abe (US 2012/0253480 - hereinafter "Abe").

**The Beliles and Buck references are not analogous**

1. It is settled that: "*A reference qualifies as prior art for an obviousness determination under § 103 only when it is analogous to the claimed invention.*" In re Klein, 647 F.3d 1343, 1348 (Fed. Cir. 2011) (citing Innovention Toys, v. MGA Entm't, Inc., 637 F.3d 1314, 1321 (Fed. Cir. 2011), and In re Bigio, 381 F.3d 1320, 1325 (Fed. Cir. 2004)).

2. It is further settled that: "*Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved*". [In re Klein, 647 F.3d at 1348 (quoting In re Bigio, 381 F.3d at 1325)].

3. It is further settled that: "*[T]he field of endeavor test … **requires the PTO to determine** the appropriate field of endeavor by reference to explanations of the invention's subject matter in the patent application, including the embodiments, function, and structure of the claimed invention.*" (Emphasis added) In re Bigio, 381 F.3d at 1325.

4. The Federal Circuit has held that the Office carries its procedural burden when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for rejection, "*together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.*" See In re Jung, 637 F.3d 1356, 1362 (Fed. Cir. 2011) (brackets in original, quoting 35 U.S.C. § 132). Put simply, the Office is required to set forth the statutory basis of the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of§ 132. Id.; see also Chester v. Miller, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (noting that§ 132 "*is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection*").

5. Further, according to MPEP 707.07(f) "… *an examiner must provide clear explanations of all actions taken* …", and the examiner "… *take note of the applicant's argument and answer the substance of it.*". **Accordingly, the Examiner is required to clearly state WHY any cited reference is analogous (same field or same problem), and to respectively define the appropriate field of problem.** Further, as detailed in MPEP 707.07(f) the response to non-analogous art as part of form paragraph 7.37.05 need to [2] "*explain why the reference is analogous art*".

The absence of a reply to a specific rejection, issue, or comment, does not signify agreement with that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims that have not been expressed.

Nothing in this reply should be understood as conceding any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claims does not necessarily signify concession of unpatentability to the claim before its amendment. It should further be understood that any filing of a terminal disclaimer to obviate a rejection based on nonstatutory double patenting is not an admission of the propriety of the rejection.

If the above arguments should not now place the application in the condition for allowance, the examiner is invited to call undersigned counsel to resolve any remaining issues.

Respectfully submitted,

By /Yehuda Binder/
Yehuda Binder
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Amazon EX1004 Page 130

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c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan 52171-02 IL ISRAEL

In re Application of: BINDER, Y., et al.
Application No. **15/657,163**
Filed: July 23, 2017
Title of Invention: SYSTEM AND METHOD FOR SERVER-BASED CONTROL

DECISION ON PETITION
UNDER 37 C.F.R. § 1.181

This is a decision on the petition filed **February 09, 2021** under 37 CFR § 1.181 to invoke Supervisory Authority of the Commissioner and require the Examiner to withdraw the finality of the office action mailed February 01, 2021.

The petition is **DISMISSED**

More specifically, petitioner request that final office action mailed February 01, 2021 (hereafter the "final action") be vacated. Petitioner's request that final action be vacated will be treated as a petition to withdraw finality. Petitioner is additionally requesting a new non-final office action, which includes a proper response that clearly explains why the cited rationales are analogous, and further provides combining rationales for all appropriate claim rejections that are not based on the primary (Beliles) reference.

## RELEVANT PROSECUTION HISTORY

10/03/2018 Appeal brief was filed was filed from final office action mailed September 4, 2018. (Hereafter referred to as the "Brief")

01/04/2019 Examiner's Answer in mailed in response to the Brief.

05/04/2020 Patent Trial and Appeal Board (hereafter referred to as the "Board") renders a decision, in sum **affirming** the 35 U.S.C. §103 rejection over Beliles, Buck, and Abe references (p. 33).

06/12/2018 Request for continued examination (RCE) under 37 C.F.R. §1.114 was filed. The RCE included an information disclosure statement, an amendment to the description, claims 1, 4, 6, 12, 25, 27-28, and 30, **no** amendment to the drawings, no new arguments, or **no** new explicit arguments in support of patentability.

12/22/2020 Non-final office action (hereafter referred to as the "non-final action") was mailed. Among other items, the non-final action includes a rejection under 35 U.S.C. §103 rejection of claims 1-30 as being unpatentable over Beliles et al. (Beliles) in view of Buck et al. (Buck) in further view of Abe.

01/13/2021 Response to non-final requesting reconsideration under 37 C.F.R. §1.111 was filed. The reply by the applicant specifically points out the supposed errors in the examiner's action. The reply did **not** present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable over any applied references. **No** arguments specifically pointing out how the language of the claims patentably distinguishes them from the references were presented.

02/01/2021 Final office action (hereafter referred to as the "final action") was mailed. Among other items, the final action includes a rejection under 35 U.S.C. §103 rejection of claims 1-30 as being unpatentable over Beliles et al. (Beliles) in view of Buck et al. (Buck) in further view of Abe.

02/09/2021 A petition under 37 C.F.R. §1.181 that final office action mailed February 01, 2021 be vacated. The petition additionally requests a new non-final office action, which includes a proper response that clearly explains why the cited rationales are analogous, and further provides combining rationales for all appropriate claim rejections that are not based on the primary (Beliles) reference.

## PERTINENT STATUTES, RULES AND REGULATIONS

**MPEP § 706.07(a) Final Rejection, When Proper on Second Action** states:

Second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims, nor based on information submitted in an information disclosure statement filed during the period set forth in 37 C.F.R. §1.97(c) with the fee set forth in 37 C.F.R. §1.17(p). Where information is submitted in an information disclosure statement during the period set forth in 37 C.F.R. §1.97(c) with a fee, the examiner may use the information submitted, e.g., a printed publication or evidence of public use, and make the next Office action final whether or not the claims have been amended, provided that no other new ground of rejection which was not necessitated by amendment to the claims is introduced by the examiner. See MPEP § 609.04(b).

Furthermore, a second or any subsequent action on the merits in any application will not be made final if it includes a rejection, on newly cited art, other than information submitted in an information disclosure statement filed under 37 C.F.R. §1.97(c) with the fee set forth in 37 C.F.R. §1.17(p), of any claim not amended by applicant or patent owner in spite of the fact that other claims may have been amended to require newly cited art. Where information is submitted in a reply to a requirement under 37 C.F.R. §1.105, the examiner may NOT make the next Office

action relying on that art final unless all instances of the application of such art are necessitated by amendment.

For guidance in determining what constitutes a new ground of rejection, see MPEP § 1207.03(a).

**1.113(a) Final rejection or action**

(a) On the second or any subsequent examination or consideration by the examiner the rejection or other action may be made final, whereupon applicant's, or for ex parte reexaminations filed under § 1.510, patent owner's reply is limited to appeal in the case of rejection of any claim (§ 41.31 of this title), or to amendment as specified in § 1.114 or § 1.116. Petition may be taken to the Director in the case of objections or requirements not involved in the rejection of any claim (§ 1.181). Reply to a final rejection or action must comply with § 1.114 or paragraph (c) of this section. For final actions in an inter partes reexamination filed under § 1.913, see § 1.953.

**707.07(f) Answer All Material Traversed**

Where the requirements are traversed, or suspension thereof requested, the examiner should make proper reference thereto in his or her action on the amendment. Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it.

If applicant's arguments are persuasive and upon reconsideration of the rejection, the examiner determines that the previous rejection should be withdrawn, the examiner must provide in the next Office communication the reasons why the previous rejection is withdrawn by referring specifically to the page(s) and line(s) of applicant's remarks which form the basis for withdrawing the rejection. It is not acceptable for the examiner to merely indicate that all of applicant's remarks form the basis for withdrawing the previous rejection.

**35 C.F.R. §1.104 Nature of examination**

(b) Completeness of examiner's action. The examiner's action will be complete as to all matters, except that in appropriate circumstances, such as misjoinder of invention, fundamental defects in the application, and the like, the action of the examiner may be limited to such matters before further action is made. However, matters of form need not be raised by the examiner until a claim is found allowable.

## DECISION

Petition filed February 09, 2021 under 37 CFR § 1.181 to invoke Supervisory Authority of the Commissioner and require the Examiner to withdraw the finality of the office action mailed February 01, 2021 including additional explanation mentioned above has been fully considered. The entire prosecution history has been carefully reviewed.

The **status** of the claim(s) referred to below, refers to a change to an existing claim presented in a parenthetical expression included in the complete listing of all claims ever presented in the application. (see MPEP §714(II)(C)) Applicant only amended the claims once after the Board's decision when filing the RCE on June 22, 2020, prior to both the non-final and final action, herein mentioned below.

1. Petitioner regarding the final action sustains that it fails to include any explanation why the Beliles and Abe references are analogous and that a statement that Buck is analogous art was raised in this Action for the first time. Thus, according to the MPEP, the Applicant has not been given a fair opportunity to provide a proper and full response to the Office's position. Hence, not only that the Action is an incomplete Office action under 37 C.F.R § 1.104 (b), § 1.112, § 1.113 (b), and MPEP § 707.7(f), the Action fails to take note of the applicant's arguments and answer the substance of it according to MPEP §707.7(f).

In response to petitioner's arguments it is noted the Board in its decision already established in response to Appellant's arguments that Beliles and Abe are analogous and explained why. (see p. 13 of the Boards decision, but not limited thereto). The analogous art test is not dependent on claims or motivation to combine. Thus, arguments that the Board decision is not applicable as it involves different claims and focusses on motivation to combine is unpersuasive. Similarly, the Board in its decision also established that Buck is analogous art and explained why. (see p. 10 of the Boards decision, but not limited thereto).

The prosecution history of instant application shows that the Office has taken note of the applicant's arguments and answer the substance it. As far as a fair opportunity to reply, it is noted that Appellants have fair opportunity to reply in accordance to 37 C.F.R. §41.54. (see MPEP §1214 Procedure Following Decision by Board) The entire prosecution has been reviewed and finds no evidence that supports that the final action is incomplete, that arguments have not been addressed nor that a fair opportunity to reply to the Office's position has not been provided.

2. Petitioner regarding the non-final action sustains that regarding claims 2-3, 6-10, 13, 16, and 25 relying on Buck and claims 17-18 relying on Abe, the action fails to provide a proper rationale for supporting why the Beliles reference should be modified to include the features recited in these claims, because the rationale presented in claim 1, clearly is not applicable to the different features recited in these claims. Thus, according to the MPEP, the Applicant has not been given a fair opportunity to provide a proper and full response to the Office's position. Hence, not only that the Action is an incomplete Office action under 37 C.F.R § 1.104 (b), § 1.112, § 1.113 (b), and MPEP § 707.7(f), the Action fails to take note of the applicant's arguments and answer the substance of it according to MPEP §707.7(f).

In response to petitioner's arguments, it is noted the Board in its decision articulated reasoning with some rational underpinning to support the legal conclusion of obviousness regarding claims 2-3, 6-10, 13, 16, and 25 relying on Buck. More specifically, when addressing original claim 3, the Board did provide a reasoning/rationale to support a conclusion of obviousness (see p. 16-17 of the Board's decision). Similarly, when addressing original claim 8 (see p. 18-19), when addressing original claim 9, (see p. 19), and when addressing previously presented claim 13 (see p. 21-22), the Board in its decision articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. Regarding original claim 2, when addressing claims 11-12, the Board in its decision articulated reasoning with some rational

underpinning to support the legal conclusion of obviousness covering the subject matter of original claim 2 (see p. 19-21).

The Board in its decision when addressing claims 1, 6, 7 and 10 (i.e. currently amended claim 6, original claim 7 and previously presented claim 10) articulated reasoning with some rational underpinning to support the legal conclusion of obviousness for claims. (see p. 5-14) The amendment to claim 6 from "actuator" to multiple actuators, namely -- each of the first and second actuator -- has been considered and found insufficient to reasonably render the reasoning/rationale to support a conclusion of obviousness presented in the Board's decision, non-viable or inapplicable.

The Board in its decision when addressing previously presented claim 16 articulated reasoning with some rational underpinning to support the legal conclusion of obviousness for claims (see p. 25-26) and when addressing currently amended claim 25 articulated reasoning with some rational underpinning to support the legal conclusion of obviousness for claims (see p. 30-31). The amendment to claim 25 from "the actuator" to -- the first actuator -- and has been considered and found insufficient to reasonably render the reasoning/rationale to support a conclusion of obviousness presented in the Board's decision, non-viable or inapplicable.

In response to petitioner's arguments it is noted the Board in its decision articulated reasoning with some rational underpinning to support the legal conclusion of obviousness regarding claims 17-18 relying on Abe. More specifically, the Board in its decision when addressing previously presented claim 17 articulated reasoning with some rational underpinning to support the legal conclusion of obviousness for claims (see p. 26-27) and when addressing original claim 18 articulated reasoning with some rational underpinning to support the legal conclusion of obviousness for claims (see p. 27-28).

The prosecution history of instant application shows that the Office has taken note of the applicant's arguments and answer the substance it. As far as a fair opportunity to reply, Appellants had fair opportunity to reply in accordance to 37 C.F.R. §41.54. (see MPEP §1214 Procedure Following Decision by Board)

3. Petitioner regarding the non-final action sustains that no reasoning was provided for the obviousness rejection of claims 19-24, and claims 26-30 and that copied part(s) of the Board's decision were raised in this action for the first time. Thus, according to the MPEP, the Applicant has not been given a fair opportunity to provide a proper and full response to the Office's position. Hence, not only that the Action is an incomplete Office action under 37 C.F.R § 1.104 (b), § 1.112, § 1.113 (b), and MPEP § 707.7(f), the Action fails to take note of the applicant's arguments and answer the substance of it according to MPEP §707.7(f).

In response to petitioner's arguments, it is noted the reasoning for the obviousness rejection of claims 19-24, and claims 26-30 was provided in the Board's decision. More specifically, regarding original and previously presented claims 19-24, and previously presented and currently amended 26-30, the Board in its decision, considered the language Applicant noted and nevertheless, sustained the rejection of these claims, including articulating a reasoning to support a legal conclusion of obviousness (see p. 28-33). As far as "this argument is raised in this final action for the first time", such assessment is unavailing. Reasoning to support a legal conclusion of obviousness was made of record by Board in its decision, providing appellant an opportunity to respond to the rejection.

The prosecution history of instant application shows that the Office has taken note of the applicant's arguments and answer the substance it. As far as a fair opportunity to reply, Appellants have fair opportunity to reply in accordance to 37 C.F.R. §41.54. (see MPEP §1214 Procedure Following Decision by Board) The entire prosecution has been reviewed and finds no evidence that supports that the final action is incomplete, that arguments have not been addressed nor that a fair opportunity to reply to the Office's position has not been provided.

Accordingly, the petition is **dismissed**.

Any inquiry regarding this decision should be directed to Quality Assurance Specialist Beatriz Prieto whose telephone number is (571) 272-3902. If attempts to reach the previously mentioned telephone are unsuccessful, Chris Grant, also a Quality Assurance Specialist, can be reached at (571) 272-7294.

/JOSEPH E AVELLINO/

Joseph Avellino, (Acting) Director of Technology Center 2400

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 15/657,163 | 07/23/2017 | Yehuda BINDER | BINDER-014-US3 | 1088 |

131926 7590 03/03/2021

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| EXAMINER | |
|---|---|
| KHAN, HASSAN ABDUR-RAHMAN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2456 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 03/03/2021 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

ATTY.'S DOCKET: BINDER-014-US3

| | | |
|---|---|---|
| In re Application of: | ) | Confirmation No. 1088 |
| | ) | |
| Yehuda BINDER | ) | Art Unit: 2456 |
| | ) | |
| Appln. No.: 15/657,163 | ) | Examiner: Khan, Hassan |
| | ) | |
| Filed: July 23, 2017 | ) | Washington, D.C. |
| | ) | |
| For: SYSTEM AND METHOD FOR SERVER BASED CONTROL | ) | February 9, 2021 |
| | ) | |

Honorable Commissioner for Patents
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Honorable Commissioner:

***Petition to vacating of a final action and for issuing of a new proper non-final office action***

A petition under 37 CFR 1.181 is hereby submitted from a final action dated February 1, 2021.

## Actions Requested

1. Vacating of the final action dated February 1, 2021.
2. Issuing of a new non-final office action, which includes a proper response that clearly explains WHY the cited references are analogous and further provides combining rationales for all appropriate claim rejections that are not based on the primary (Beliles) reference.

## Statement of Facts Involved

1. A non-final action was issued on December 22, 2020.
2. A response to the non-final action was filed on January 13, 2021.
3. A final action (hereinafter – "Action") was issued on February 1, 2021.

## Points to be Reviewed

### a. Defining why the references are analogous

1. As explained in the response, **"As detailed in MPEP 707.07(f) the response to non-analogous art as part of form paragraph 7.37.05 need to [2] "*explain why the reference is analogous art*". Further, according to MPEP 707.07(f) "… *an examiner must provide clear explanations of all actions taken* …", and the examiner "… *take note of the applicant's argument and answer the substance of it.*"".**
2. A careful review of section 5 of the Action, entitled: "*Response to argument*", fails to find any explanation WHY the Beliles and Abe references are analogous. This section merely amounts to no more than copying unrelated material from the former PTAB decision, involving different claims (in view of the amendments in claim 1), and focusing on motivation to combine.

3. Indeed on the bottom of page 18 the Action, the Buch reference is stated as analogous being pertinent to the same defined problem as the Applicant. However, this argument is raised in this Action for the first time. Thus, according to the MPEP, the Applicant has not been given a fair opportunity to provide a proper and full response to the Office's position.

4. Hence, not only that the Action is an incomplete Office action under 37 C.F.R § 1.104(b), § 1.112, § 1.113(b), and MPEP § 707.7(f), the Action fails to take note of the applicant's arguments and answer the substance of it according to MPEP 707.7(f).

**b. No rationale provided for combining with the references.**

1. In part (b) of the response to the non-final office action, the Applicant stated that: "*In claims 2-3, 6-10, 13, 16, and 25, the Action is based on the Buck reference to supplement the missing limitations. Similarly, in claim 17-18, the Action is based on the Abe reference to supplement the missing limitations. However, the Action fails to provide a proper rationale for supporting WHY the Beliles reference should be modified to include the features recited in these claims. The rationale stated in claim 1 clearly is not applicable to the different features recited in these claims.*".

2. A careful review of section 5 of the Action, entitled: "*Response to argument*", fails to find any clear response or any proper rationale for modifying *the Beliles reference to include the features recited in claims 2-3, 6-10, 13, 16, and 25.*

3. Hence, not only that the Action is an incomplete Office action under 37 C.F.R § 1.104(b), § 1.112, § 1.113(b), and MPEP § 707.7(f), the Action fails to take note of the

applicant's arguments and answer the substance of it according to MPEP 707.7(f).

**c. Improper rejections – No reasoning provided for obviousness rejections.**

1. In part (c) of the response to the non-final office action, the Applicant stated that: "*The rejections of claims 19-24 merely states that each of these claims "… does not teach or further define over the limitation in claim 17 respectively. Therefore claim …. Is rejected for the same rationale of rejection as set forth in claim 17. ". Similarly, the rejections of claims 26-30 merely states that each of these claims "… does not teach or further define over the limitation in claim 25 respectively. Therefore claim …. Is rejected for the same rationale of rejection as set forth in claim 17. ""*.

2. A careful review of section 5 of the Action, entitled: "*Response to argument*", fails to find any clear response.

3. This section merely amounts to no more than copying unrelated material from the former PTAB decision, involving different claims (in view of the amendments in claim 1). Even assuming, *arguendo*, that the PTAB decision copied parts are relevant here, this argument is raised in this final Action for the first time. Thus, according to the MPEP, the Applicant has not been given a fair opportunity to provide a proper and full response to the Office's position.

4. Hence, not only that the Action is an incomplete Office action under 37 C.F.R § 1.104(b), § 1.112, § 1.113(b), and MPEP § 707.7(f), the Action fails to take note of the applicant's arguments and answer the substance of it according to MPEP 707.7(f).

Respectfully submitted,

By /Yehuda Binder/
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| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 41877574 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 09-FEB-2021 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 14:36:48 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| Submitted with Payment | no |
|---|---|

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Petition for review by the Technology Center SPRE | 40C-Petition-for-vacating-finality.pdf | 39906<br>a7b826e0405377efb7a68d67a6f07ee0fbfc5675 | no | 5 |

**Warnings:**

| Information: | |
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| Total Files Size (in bytes): | 39906 |

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**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 15/657,163 | 07/23/2017 | Yehuda BINDER | BINDER-014-US3 | 1088 |

131926 7590 02/01/2021

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| EXAMINER | |
|---|---|
| KHAN, HASSAN ABDUR-RAHMAN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2456 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 02/01/2021 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| *Office Action Summary* | **Application No.** 15/657,163 | **Applicant(s)** BINDER et al. | |
|---|---|---|---|
| | **Examiner** HASSAN A KHAN | **Art Unit** 2456 | **AIA (FITF) Status** No |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☑ Responsive to communication(s) filed on 01/13/2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☑ This action is **FINAL.** 2b) ☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims***

5) ☑ Claim(s) 1-30 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-30 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

**Application Papers**

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

**DETAILED ACTION**

**1.** Claims 1 - 30 have been examined and are pending.

***Priority***

**2.** It is noted that the appellant **FAILED** to provide evidence regarding a limitation in the *Independent Claim 1 "a microphone in the client device"* in prior-filed provisional application 61/584,500 (filed 01/09/2012). It is noted that disclosure of prior-filed provisional application 61/584,500 **does not provide support** for this claimed subject matter (MPEP Form Paragraph ¶2.09 and ¶2.10). It is noted that a similar warning have been issued in the related application (15832787, Examiner's Answer to Appeal Brief submitted to PTAB on 04/28/2020) regarding the use of the term 'multiple microphones', however **NO ACTION** has been taken by the Applicant. It is clearly noted that the specifications of the provisional application 61/584,500 (filed on 01/09/2012 by the applicant) **DOES NOT** mention any of these terms: 'microphone' or 'multiple microphone' or 'electroacoustic sensor'.

***Information Disclosure Statement***

**3.** The five (5) information disclosure statements (IDS) submitted on 11/15/2019, 01/08/2020, 03/13/2020, 06/22/2020 and 10/05/2020, in addition to the previous nine (9) information disclosure statements (IDS) submitted on 07/23/2017, 08/17/2017, 11/29/2017, 05/29/2018 and 11/19/2018 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements has not being considered by the examiner. It is impractical for the examiner to review the references thoroughly with the number of references cited in the case. By initialing each of the cited references on the accompanying 1449 forms, the examiner is merely acknowledging the submission of the cited references and merely indicating that only a cursory review is made of the cited references. Please identify the top 10-20 references that is the most relevant art, with pinpoint specific citations for review.

An applicant's duty of disclosure of material and information is not satisfied by presenting a patent examiner with "a mountain of largely irrelevant [material] from which he is presumed to have been able, with his expertise and with adequate time, to have found the critical [material]. It ignores the real world conditions under which examiners work." Rohm & Haas Co. v. Crystal Chemical Co., 722 F.2d 1556, 1573 [220 USPQ 289] (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (Emphasis in original). Patent applicant has a duty not just to (disclose pertinent prior art references but to make a disclosure in such way as not to "bury" it within other disclosures of less relevant prior art; See Golden Valley Microwave Foods Inc. v. Weaver Popcorn Co. Inc., 24 USPQ2d 1801 (N.D Ind. 1992); Molins PLC v. Textron Inc., 26 USPQ2d 1889, at 1899 (D.Del. 1992); Penn Yan Boats, Inc. v. Sea Lark Boats, Inc. et al., 175 USPQ 260, at 272 (S.D. Fl-1972).

***Claim Rejections - 35 USC § 103***

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims the examiner presumes that the subject matter of the various claims was commonly owned as of the effective filing date of the claimed invention(s) absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and effective filing dates of each claim that was not commonly owned as of the effective filing date of the later invention in order for the examiner to consider the applicability of 35 U.S.C. 102(b)(2)(C) for any potential 35 U.S.C. 102(a)(2) prior art against the later invention.

**4.** Claims 1 - 30 are rejected under 35 U.S.C. 103 as being unpatentable over US Patent Application Publication No. 2007/0283005 to Beliles et al. (hereinafter Beliles), in view of US Patent Application Publication No. 2009/0089065 to Buck et al. (hereinafter Buck) and in view of US Patent Application Publication No. 2012/0253480 to Abe.

**Regarding Claim 1**, Beliles discloses (in ¶0004) a method and system for dynamically responding to non-network events at a network device in a computer network that further includes:

**a method, for use with a client device in a building communicating over a wireless network and an internet-connected server device external to the building, the method comprising;** Beliles discloses (in ¶0015, ¶0016 and ¶0034) a building such as a server room with installed network-attached sensors, that transmits the data over a network such as the Internet (i.e. external network), to destination devices such as a monitoring system or a control room (i.e. control server) using network devices such as routers in case of the non-network events (e.g. fires, floods, unauthorized physical access etc.).

Beliles does not explicitly disclose capturing, by a microphone in the client device, a first human voice data, sending to the server, by the client device via the wireless network, processing, by the server, the captured first human voice data, operating multiple actuators in a controlled device in response to captured human voice data, receiving, by the server over the Internet, the captured human voice data, and capturing, by a microphone in the client device, a second human voice data, sending to the server, by the client device via the wireless network, the captured second human voice data, receiving, by the server over the Internet, the captured second human voice data, processing, by the server, the captured second human voice data, responsive to the processing, sending a second message, by the server to the controlled device over the Internet, receiving, by the controlled device via the wireless network, the second message, and operating a second actuator in the controlled device in response to the received second message. However, in an analogous art, Buck teaches:

**capturing, by a microphone in the client device, a first human voice data, sending to the server, by the client device via the wireless network;** Buck teaches capturing human voice data using the microphones (in ¶0031) and then transmitting to external devices using a wireless network (¶0050).

**processing, by the server, the captured first human voice data, operating multiple actuators in a controlled device in response to captured human voice data, receiving, by the server over the Internet, the captured human voice data;** Buck teaches (¶28) wireless vehicle buses 408 convey the control signals and/or actuator signals to one or more local or remote (e.g., out-of-vehicle) destinations (i.e. and external server connected over the internet). Buck teaches that spoken words are converted into recognizable commands and in response the actuator may perform an action (in ¶28-¶32). The devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors, sensor thresholds, visual/aural setting, etc.) that may be used to adjust mechanical and/or electronic elements and devices (e.g. adjusting mirrors, adjusting seat, in Fig. 5).

**capturing, by a microphone in the client device, a second human voice data, sending to the server, by the client device via the wireless network, the captured second human voice data, receiving, by the server over the Internet, the captured second human voice data, processing, by the server, the captured second human voice data, responsive to the processing, sending a second message, by the server to the controlled device over the Internet, receiving, by the controlled device via the wireless network, the second message, and operating a second actuator in the controlled device in response to the received second message;** Buck teaches capturing human voice data using the microphones (in ¶31) and then transmitting to external devices (such as a server) using a wireless network (¶50). Buck teaches (¶28) wireless vehicle buses 408 convey the control signals and/or actuator signals to one or more local or remote (e.g., out-of-vehicle) destinations (the Office and the PTAB decision on Appeal 2019-002056 on 05/04/20 notes: *we see no reason why these destinations cannot include an external internet-connected server*). Buck teaches that spoken words are converted into recognizable commands and in response the actuator may perform an action (in ¶28-¶32). The devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors, sensor thresholds, visual/aural setting, etc.) that may be used to adjust mechanical and/or electronic elements and devices (e.g. adjusting mirrors, adjusting seat, in Fig. 5). Buck teaches (in Fig. 5 and ¶36) when one or more user(s) desires to initiate adjustments on one or more actuators (e.g. first actuator i.e. mirror or second actuator i.e. seat), the user(s) may articulate the code phrase, e.g., "Mirror and Seat setting", or part of the code phrase (e.g., without a command word like "store"). When received, the speech recognition and control process may differentiate different users (e.g., multiple users) by analyzing the speech input and detect authorizations. Buck teaches (¶38) individual voice characteristics of a speaker (user) may be stored locally or remotely in a central location to identify speakers. Different users (e.g., drivers, passengers, occupants) may initiate automatic adjustments of vehicle elements even when they articulate similar or identical code phrases.

It would have been obvious as of the effective filing date to one of ordinary skill in the art to combine a method, for use with a client device in a building communicating over a wireless network and an internet-connected server device external to the building, as disclosed by Beliles, and capturing, by a microphone in the client device, a first human voice data, sending to the server, by the client device via the wireless network, processing, by the server, the captured first human voice data, operating multiple actuators in a controlled device in response to captured human voice data, receiving, by the server over the Internet, the captured human voice data, and capturing, by a microphone in the client device, a second human voice data, sending to the server, by the client device via the wireless network, the captured second human voice data, receiving, by the server over the Internet, the captured second human voice data, processing, by the server, the captured second human voice data, responsive to the processing, sending a second message, by the server to the controlled device over the Internet, receiving, by the controlled device via the wireless network, the second message, and operating a second actuator in the controlled device in response to the received second message, as taught by Buck, for the purpose of implementing improved processes to Beliles's system by adding human speech recognition and actuator voice control and adjustments of one or more devices using the speech patterns, accents and natural language processing (Buck, ¶0018).

Beliles in view of Buck does not explicitly disclose processing, by the server, responsive to the processing, sending a message, by the server to the client over the Internet, receiving, by the controlled device via the wireless network, the message, and operating the actuator in the controlled device in response to the received message. However, in an analogous art, Abe teaches:

**processing, by the server, the responsive to the processing, sending a message, by the server to the client over the Internet, receiving, by the controlled device via the wireless network, the first message, operating a first actuator in the controlled device in response to the first received message;** Abe teaches (in Fig. 15) a control apparatus is connected to a plurality of networks through the internet

and includes a sensor information acquisition section, a sensor information accumulation section, a control command determination section, a control rule accumulation section, a communication section and a device control section. The control command determination section determines the control command on the basis of the sensor information and the control rules (i.e. control logic), and accordingly the device control section controls each of the devices by outputting the control command determined in the control command determination section to the devices to be controlled (¶0050 and ¶0051).

It would have been obvious as of the effective filing date to one of ordinary skill in the art to combine the method for use with a client device in a building communicating over a wireless network and an internet-connected server device external to the building and capturing, by a microphone in the client device, a first human voice data, sending to the server, by the client device via the wireless network, processing, by the server, the captured first human voice data, operating multiple actuators in a controlled device in response to captured human voice data, receiving, by the server over the Internet, the captured human voice data, and capturing, by a microphone in the client device, a second human voice data, sending to the server, by the client device via the wireless network, the captured second human voice data, receiving, by the server over the Internet, the captured second human voice data, processing, by the server, the captured second human voice data, responsive to the processing, sending a second message, by the server to the controlled device over the Internet, receiving, by the controlled device via the wireless network, the second message, and operating a second actuator in the controlled device in response to the received second message, as disclosed by Beliles in view of Buck, and processing, by the server, responsive to the processing, sending a message, by the server to the client over the Internet, receiving, by the controlled device via the wireless network, the message, and operating the actuator in the controlled device in response to the received message, as taught by Abe, for the purpose of implementing an internet-connected control server that communicates with home network to monitor

the conditions via sensors and sends the control command over the wireless internet to the controlled device when an abnormality occurs (Abe: Figs. 15, 16, ¶104 - ¶105).

**Regarding Claim 2**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the controlled device is part of, integrated with, or the same as, the client device;** Buck teaches (in ¶0020) that the controlled device (i.e. seating system, electronic entertainment, mirror controls or navigation device etc.) are part of the client device (i.e. vehicle or vehicle related system).

**Regarding Claim 3**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the processing comprises performing a voice recognition algorithm for identifying the voice of a specific person;** Buck teaches (in ¶0037 and ¶0038) that to recognize a spoken word, the process may compute a most likely sequence of states through the Hidden Markov Models (HMM). This process may be performed through a Viterbi algorithm, which may iteratively determine the most likely path through the associated trellis. Individual voice characteristics of a speaker (user) may be stored locally or remotely in a central location (e.g., in a relational database that may be structured as the database described above) to identify speakers.

**Regarding Claim 4**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Beliles discloses:

**wherein the client device further comprises a sensor that outputs sensor data that responds to a physical phenomenon, wherein the method further comprising sending to the server, by the client device via the wireless network, the sensor data, and wherein the first message is sent by the server in**

**response to the sensor data;** Beliles discloses (in Fig. 6 and ¶0052) one or more sensors automatically detects one or more non-network events (i.e. sensor data that responds to a physical phenomenon), and notifications of the non-network events are then transmitted over the network to one or more destination network devices. Beliles discloses (in ¶0054) that in response to the received notifications, the network device generates a response (i.e. a message) such as an instruction by the network device to one or more network-attached physical control devices to modify one or more physical parameters based on the applied policy.

**Regarding Claim 5**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 4. Further, Beliles discloses:

**wherein the sensor is a thermoelectric sensor that responds to a temperature or to a temperature gradient of an object using conduction, convection, or radiation, wherein the sensor is a photoelectric sensor that responds to a visible or an invisible light, the invisible light is infrared, ultraviolet, X-rays, or gamma rays, wherein the photoelectric sensor is based on the photoelectric or photovoltaic effect, and comprises a semiconductor component that comprises a photodiode, a phototransistor, or a solar cell, or wherein the photoelectric sensor is based on Charge-Coupled Device (CCD) or a Complementary Metal-Oxide Semiconductor (CMOS) element;** Beliles discloses (in ¶0028) that one or more sensors, such as motion sensor 121, smoke sensor 122, fire sensor 123, or other network-attached sensors (e.g. thermoelectric sensor, moisture sensors, etc.) may be attached to the network through one or more network-attached sensor translators 131 and 132, or may be directly attached to the network (e.g., a sensor 124 with integrated translator) themselves.

**Regarding Claim 6**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein each of the first and second actuators is directly or indirectly affecting, changing, producing, or creating a physical phenomenon;** Buck teaches (in ¶0032) that the speech recognition and control process may interface a physical or a wireless bus system that interfaces in-vehicle and/or out-vehicle devices and networks. The devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors, sensor thresholds, visual/aural setting, etc.) that may be used to adjust mechanical (i.e. physical) and/or electronic elements and devices.

**Regarding Claim 7**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the physical phenomenon comprises temperature, humidity, pressure, audio, vibration, light, motion, sound, proximity, flow rate, electrical voltage, or electrical current;** Buck teaches (in ¶0028) the phrase may actuate one or more operations such as the position of one or more seats, one or more mirrors, or communicate or program one or more powertrain, chassis, climate, entertainment, or navigation devices (e.g., a radio, a media or multi-media system, a navigation system, etc.). In other processes, the operation may tune a pass band of a bandwidth filter (e.g., select an audio channel), adjust a volume level, a treble setting, a bass setting, a balance control, and/or other aural settings.

**Regarding Claim 8**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the client device comprises multiple microphones, and wherein the capturing comprises capturing, by the multiple microphones in the client device, the human voice data;** Buck teaches (in ¶0031) some systems interface one or more microphones or a microphone array that includes two or more directional microphones (e.g., multiple directional microphones).

**Regarding Claim 9**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 8. Further, Buck discloses:

**wherein the multiple microphones are arranged as a directional microphones array operative to estimate a number, magnitude, frequency, Direction-Of-Arrival (DOA), distance, or speed of a phenomenon impinging the microphones array;** Buck teaches (in ¶0031) some systems interface one or more microphones or a microphone array that includes two or more directional microphones (e.g., multiple directional microphones).

**Regarding Claim 10**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the microphone is an omnidirectional, unidirectional, or bidirectional microphone that is based on the sensing an incident sound based motion of a diaphragm or a ribbon, or wherein the microphone comprises a condenser, an electret, a dynamic, a ribbon, a carbon, or a piezoelectric microphone; the multiple microphones are arranged as a directional microphones array operative to estimate a number, magnitude, frequency, Direction-Of-Arrival (DOA), distance, or speed of a phenomenon impinging the microphones array;** Buck teaches (in ¶0031) that to convert sound into analog signals or digital signals, some systems interface one or more microphones or a microphone array that includes two or more directional microphones (e.g., multiple directional microphones).

**Regarding Claim 11**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Beliles discloses:

**wherein the client device or the controlled device are addressable in the wireless network or the Internet using distinct locally administered addresses or a universally administered digital addresses**

**stored in a volatile or non-volatile memory of the respective device and uniquely identifying the respective device in the network;** Beliles teaches (in ¶0035 - ¶0039) that the network device send a notification using the TCP/IP data packets, and the message includes one or more headers 310 (e.g., IP/ATM headers, etc.), and a data field 320. Source address 312 and destination address 314 within the header 310 are the network addresses for the sending device (e.g., sensor translators) and the receiving device (e.g., a monitor/control system 140), respectively. Further, the memory 240 comprises a plurality of storage locations that are addressable by the processor 220 and the network interfaces 210 for storing software programs and data structures associated with the present invention (¶0032).

**Regarding Claim 12**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Beliles discloses:

**wherein the address is a MAC layer address that is MAC-48, EUI-48, or EUI-64 address type or wherein the address is a layer 3 address and is static or dynamic IP address that is IPv4 or IPv6 type address;** Beliles teaches (in ¶0035 - ¶0039) that the network device send a notification using the TCP/IP data packets, and the message includes one or more headers (e.g., IP/ATM headers, etc.), and a data field. Source address and destination address within the header are the network addresses (i.e. MAC layer addresses and/or IP addresses) for the sending device (e.g., sensor translators) and the receiving device (e.g., a monitor/control system), respectively.

**Regarding Claim 13**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the wireless network is a Wireless Personal Area Network (WPAN), that is according to, or based on, Bluetooth™ or IEEE 802.15.1-2005standards, or wherein the WPAN is a wireless control network that is according to, or based on, Zigbee™, IEEE 802.15.4-2003, or Z-Wave™ standards;** Buck

teaches (in ¶0052) that the speech recognition controller may be compliant with a Wi-Fi protocols or multiple protocols or subsets (e.g., ZigBee, High Speed Packet Access (e.g., High Speed Downlink Packet Access and/or High Speed Uplink Packet Access), Bluetooth, Mobile-Fi, Ultrawideband, Wi-Fi, WiMax, mobile WiMax, cellular, satellite, etc.

**Regarding Claim 14**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Beliles discloses:

**wherein the wireless network is a Wireless Personal Area Network (WPAN), that is according to, or based on, Bluetooth™ or IEEE 802.15.1-2005standards, or wherein the WPAN is a wireless control network that is according to, or based on, Zigbee™, IEEE 802.15.4-2003, or Z-Wave™ standards;** Beliles teaches (in Fig. 1 and ¶0027) a schematic block diagram of an exemplary computer network 100 comprising a plurality of devices interconnected to a network cloud 110, such as, e.g., a wide area network (WAN), local area network (LAN), etc.

**Regarding Claim 15**, does not teach or further define over the limitation in claim 13 respectively. Therefore claim 15 is rejected for the same rationale of rejection as set forth in claim 13.

**Regarding Claim 16**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the wireless network is a cellular telephone network, that is a Third Generation (3G) network that uses UMTS W-CDMA, UMTS HSPA, UMTS TDD, CDMA2000 lxRTT, CDMA2000 EV-DO, or GSM EDGE-Evolution, and wherein the cellular telephone network is a Fourth Generation (4G) network that uses HSPA+, Mobile WiMAX, LTE, LTE-Advanced, MBWA, or is based on IEEE 802.20-2008;** Buck teaches (in ¶0052) a cellular or wireless protocol, a wireless or cellular telephone, a radio, a satellite, or other wireless communication system may link the speech recognition controller 404 transceivers 414 to

a privately accessible or publicly accessible distributed network. The system may be complaint with WiMax or IEEE 802.16a or may have a frequency band within a range of about 2 to about 11 GHz, a range of about 31 miles, and a data transfer rate of about 70 Mbps. In other applications, the speech recognition controller may be compliant with a Wi-Fi protocols or multiple protocols or subsets (e.g., ZigBee, High Speed Packet Access (e.g., High Speed Downlink Packet Access and/or High Speed Uplink Packet Access), Bluetooth, Mobile-Fi, Ultrawideband, Wi-Fi, WiMax, mobile WiMax, cellular, satellite, etc., referred to as the transceiver protocols) that may be automatically detected and selected and may enable this automatic access through one or more communication nodes.

**Regarding Claim 17**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Abe discloses:

**wherein the client device or the controlled device is integrated in, is part of, or is entirely included in, an appliance;** Abe teaches (in ¶0034) a control apparatus that acquires sensor information and determines a control command to control a plurality of home appliances (e.g. refrigerator, stove, oven, microwave, dishwasher, washing machine, television etc.) such as an air conditioner.

**Regarding Claim 18**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Abe discloses:

**wherein the client device or the controlled device is integrated in, is part of, or is entirely included in, an appliance;** Abe teaches (in ¶0036) a control apparatus that acquires sensor information and determines a control command to control a plurality of home appliances, such as an air conditioner.

**Regarding Claim 19**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 19 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 20**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 20 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 21**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 21 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 22**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 22 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 23**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 23 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 24**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 24 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 25**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the first actuator is an electric light source for converting electrical energy into light that emits visible or non-visible light for illumination or indication, and the non-visible light is infrared, ultraviolet, X-rays, or gamma rays;** Buck teaches (¶0032) that the devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors, sensor thresholds, visual/aural setting, etc.) that may be used to adjust mechanical and/or electronic elements and devices (e.g. controlling the

headlights, cabin lights or the fog-lights, controlling the audio speakers and volume, controlling the digital media player, controlling the windows up/down function).

**Regarding Claim 26**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 26 is rejected for the same rationale of rejection as set forth in claim 25.

**Regarding Claim 27**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 27 is rejected for the same rationale of rejection as set forth in claim 25.

**Regarding Claim 28**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 28 is rejected for the same rationale of rejection as set forth in claim 25.

**Regarding Claim 29**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 29 is rejected for the same rationale of rejection as set forth in claim 25.

**Regarding Claim 30**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 30 is rejected for the same rationale of rejection as set forth in claim 25.

***Response to Arguments***

***Claim Rejections - 35 USC § 103***

**5.** Applicant's arguments, filed on 01/13/2021, with respect to Claims 1 – 30 have been fully considered and they are not persuasive. Hence, the 35 USC § 103 rejection is maintained.

In respond to the argument (Pgs. 2, 3), "*the Action clearly fails to explain WHY the different references, such as the Beliles, Buck and Abe references are analogous … the Action fails to provide a proper rationale for supporting WHY the Beliles reference should be modified to include the features recited in these claims,"* the Examiner notes that Appellant's arguments regarding the alleged individual shortcomings of Beliles, Buck, and Abe (Appeal Br. 58-60) are unavailing where, as here, the rejection is based on the cited references' collective teachings. See In re Merck & Co., 800 F.2d 1091, 1097 (Fed. Cir. 1986). The Examiner notes that this argument was addressed by the PTAB in their decision on 05/04/2020, "first, we see no error in the Examiner's articulated rationale for combining Beliles and Buck, namely to provide hands-free actuator control and operation using voice commands in connection with Beliles's system. See Final Act. 18-19; Ans. 4-5. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. See KSR Int 7 Co. v. Teleflex, Inc., 550 U.S. 398, 417 (2007). To be sure, if the Examiner's proposed modification renders the prior art unsatisfactory for its intended purpose, the Examiner has failed to make a prima facie case of obviousness. See In re Gordon, 733 F.2d 900, 902 (Fed. Cir. 1984). But that is not the case here. Providing voice-based control, such as that in Buck, in connection with Beliles's system as the Examiner proposes would not render Beliles's system unsuitable for its intended purpose as Appellant seems to suggest (see Appeal Br. 48-19), but would merely provide additional voice-based control capabilities to at least augment Beliles's sensor-based control system—an enhancement yielding a predictable result. Accord Ans. 4 (noting that combining Buck with Beliles improves Beliles's system by adding human speech recognition and actuator voice control). We see no error in the Examiner's proposed combination despite the fact that Buck's voice control system is used in connection with a vehicle. As noted previously, Buck's wireless buses 408 in Figure 4 convey control and/or actuator signals to remote (e.g., out-of-vehicle) destinations. Buck 28. Because Buck at least suggests sending captured voice data wirelessly to a remote destination external to the vehicle for control purposes, Buck is at least reasonably pertinent to Appellant's problem of sending

captured data to a remote location for processing and control and, therefore, is analogous art. See In reBigio, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (noting that prior art is analogous if it is (1) from the same field of endeavor regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved). We reach this conclusion despite Beliles's and Buck's different patent classifications as Appellant indicates. See Appeal Br. 46 47. Although these diverse classifications can constitute some evidence of "non-analogy," this evidence is far outweighed by the references' structural and functional similarities that render them analogous art. See In re Ellis, 476 F.2d 1370, 1372 (CCPA 1973) (noting that (1) diverse patent office classification of prior art references is some evidence of "non-analogy," and (2) cross references in official search notes is some evidence of "analogy," the similarities and differences in structure and function of the references' disclosed inventions carry far greater weight). Appellant's reliance on a non-precedential Board decision that, according to Appellant, held that a vehicle-based control was non-analogous to a similar function in a building (Appeal Br. 46), is unavailing. Not only do the facts in that case differ from those at issue here, as a non-precedential decision, it is not binding on this panel in any event. See PTAB Standard Operating Procedure 2 (Rev. 10) ("SOP 2") § 1(B). Nor are we persuaded of error in the Examiner's rationale for combining Abe with the Beliles/Buck system despite Appellant's arguments to the contrary (see Appeal Br. 53-58; Reply Br. 3-5). A key aspect of the Examiner's rationale relies on the functionality of Abe's control apparatus in Figures 15 and 16. See Ans. 6. Given this functionality, the Examiner concludes that it would have been obvious to implement an internet connected control server that (1) acquires and processes information, and (2) sends associated control commands over the Internet to a controlled device and actuator when an abnormality occurs. See Final Act. 20; Ans. 6. Appellant's contention that it is ostensibly unclear why Beliles and Abe are analogous to each other (Appeal Br. 54) is unavailing. Prior art is analogous if it is (1) from the same field of endeavor as the invention, regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved. Bigio, 381 F.3d at 1325. The

analogous art test, then, does not ask whether the prior art references are analogous to each other as Appellant seems to suggest (see Appeal Br. 54), but rather asks whether the references are analogous to the claimed subject matter. See id.; see also In re Kahn, 441 F.3d 977, 986-87 (Fed. Cir. 2006). Because Beliles and Abe both involve environment control networks as the Examiner indicates (Ans. 6), the references are not only in the same field of endeavor as Appellant's invention, but they are also reasonably pertinent to Appellant's problem in that regard."

In respond to the argument (Pgs. 3, 4), "*the rejections of claims 19-24 merely states that each of these claims ... does not teach or further define over the limitation in claim 17 respectively … the applicant respectfully submits that such a statement is improper and factually not correct, for example, claim 17 recites that ... the client device or the controlled device is integrated in, is part of, or is entirely included in, an appliance, and claim 21, just as an example, further defines the appliance so that ... the primary function of the appliance is associated with environmental control, and the appliance is part of an Heating, Ventilation and Air Conditioning (HVAC) system,"* the Examiner notes that this argument was addressed by the PTAB in their decision on 05/04/2020, "we also sustain the Examiner's rejection of claims 19-24 reciting (1) various types of appliances and associated functionalities including heating food (claim 19), environmental control (claim 21), temperature control (claim 22), and cleaning (claim 23); and (2) various other types of appliances in claims 20 and 24. The Examiner clarifies the rejection on pages 11 and 12 of the Answer by finding that the network-connected home appliances in Abe's paragraph 38 can include the recited appliances. Despite Appellant's arguments to the contrary (Appeal Br. 72-73; Reply Br. 7-8), we see no error in the Examiner's reliance on Abe's paragraph 38 and Figure 1 (Ans. 11-12) for at least suggesting the recited limitations, particularly since air conditioner 52, a home appliance, is just one of the devices to be controlled as shown in Figure 1. Given Abe's exemplary and non-limiting reference to the home network connecting various types of sensors and devices installed within a home, we see no error in the Examiner's finding that these various types of devices could include the devices and

functionalities recited in claims 19 to 24 and are, therefore, obvious variations. Such an enhancement uses prior art elements predictably according to their established functions, an obvious improvement. See KSR, 550 U.S. at 417. Therefore, we are not persuaded that the Examiner erred in rejecting claims 19-24."

***Conclusion***

**6.** Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HASSAN KHAN whose telephone number is (313) 446-6574. The examiner can normally be reached on MONDAY - THURSDAY: 8AM-6PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Chea can be reached on (571) 272-3951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 - If you would like

assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. A. K./
Examiner, Art Unit 2456

/RICHARD G KEEHN/
Primary Examiner, Art Unit 2456

| Notice of References Cited | Application/Control No. 15/657,163 | Applicant(s)/Patent Under Reexamination BINDER et al. | |
|---|---|---|---|
| | Examiner HASSAN A KHAN | Art Unit 2456 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | CPC Classification | US Classification |
|---|---|---|---|---|---|---|
| * | A | US-20160062330-A1 | 03-2016 | Abe; Yuuichi | G05B15/02 | 700/12 |
| * | B | US-20070283005-A1 | 12-2007 | Beliles; Robert P. | H04L41/0816 | 709/224 |
| * | C | US-20090089065-A1 | 04-2009 | Buck; Markus | G10L15/26 | 704/275 |
| * | D | US-20150138333-A1 | 05-2015 | DeVaul; Richard Wayne | G06F3/002 | 348/78 |
| * | E | US-20100305807-A1 | 12-2010 | Basir; Otman A. | G07C5/0833 | 701/31.4 |
| * | F | US-20070038461-A1 | 02-2007 | Abbott; Lisa | G10L15/30 | 704/275 |
| * | G | US-20080215336-A1 | 09-2008 | Oesterling; Christopher L. | G10L15/26 | 704/275 |
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**FOREIGN PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Country | Name | CPC Classification |
|---|---|---|---|---|---|---|
| | N | | | | | |
| | O | | | | | |
| | P | | | | | |
| | Q | | | | | |
| | R | | | | | |
| | S | | | | | |
| | T | | | | | |

**NON-PATENT DOCUMENTS**

| * | | Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) |
|---|---|---|
| | U | |
| | V | |
| | W | |
| | X | |

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | **Examiner** | **Art Unit** |
| | HASSAN A KHAN | 2456 |

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|---|---|---|---|---|---|---|---|
| ✓ | Rejected | - | Cancelled | N | Non-Elected | A | Appeal |
| = | Allowed | ÷ | Restricted | I | Interference | O | Objected |

**CLAIMS**

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 09/29/2017 | 01/19/2018 | 06/18/2018 | 08/30/2018 | 12/28/2018 | 12/18/2020 | 01/29/2021 | | |
| | 1 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 2 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 3 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 4 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 5 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 6 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 7 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 8 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 9 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 10 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 11 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 12 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 13 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 14 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 15 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 16 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 17 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 18 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 19 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 20 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 21 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 22 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 23 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 24 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 25 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 26 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 27 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 28 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 29 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |
| | 30 | ✓ | ✓ | ✓ | ✓ | A | ✓ | ✓ | | |

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | Examiner | Art Unit |
| | HASSAN A KHAN | 2456 |

| CPC - Searched* | | |
|---|---|---|
| Symbol | Date | Examiner |
| H04L67/12, B60K 31/00, B60K 31/18, B60Y2200/11, B60Y2200/12, B60Y2200/126, B60Y2200/13, B60Y2200/30, B60Y2200/40, B60Y2200/50, B60Y2200/90, G01C 21/00, G06Q2240/00, G07C 5/008, G08G 1/00 | 9/29/2017 | H.K. |

| CPC Combination Sets - Searched* | | |
|---|---|---|
| Symbol | Date | Examiner |
| | | |

| US Classification - Searched* | | | |
|---|---|---|---|
| Class | Subclass | Date | Examiner |
| | | | |

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | |
|---|---|

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | **Examiner** | **Art Unit** |
| | HASSAN A KHAN | 2456 |

| **Search Notes** | | |
|---|---|---|
| **Search Notes** | **Date** | **Examiner** |
| Assignee search conducted (see EAST search history) | 9/29/2017 | H.K. |
| Google Patents search conducted | 9/29/2017 | H.K. |
| Inventor search conducted (see EAST search history) | 9/29/2017 | H.K. |
| EAST Search History (see attached) | 9/29/2017 | H.K. |
| Assignee search conducted (see EAST search history) | 01/19/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 01/19/2018 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 01/19/2018 | H.K. |
| Assignee search conducted (see EAST search history) | 6/18/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 6/18/2018 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 6/18/2018 | H.K. |
| Assignee search conducted (see EAST search history) | 08/30/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 08/30/2018 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 08/30/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 12/18/2020 | H.K. |
| Assignee search conducted (see EAST search history) | 12/18/2020 | H.K. |
| Google Patents search conducted (cursory review) | 12/18/2020 | H.K. |
| NPL IP.com search conducted (cursory review) | 12/18/2020 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 12/18/2020 | H.K. |
| Inventor search conducted (see EAST search history) | 01/29/2021 | H.K. |
| Assignee search conducted (see EAST search history) | 01/29/2021 | H.K. |
| Google Patents search conducted (cursory review) | 01/29/2021 | H.K. |
| NPL IP.com search conducted (cursory review) | 01/29/2021 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 01/29/2021 | H.K. |

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| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | |

| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | Examiner | Art Unit |
| | HASSAN A KHAN | 2456 |

| Interference Search | | | |
|---|---|---|---|
| US Class/CPC Symbol | US Subclass/CPC Group | Date | Examiner |
| | | | |

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| /HASSAN A KHAN/<br>Examiner, Art Unit 2456 | |

**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 54,690 | ((speech or sound or voice) with actuator) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| L2 | 3,747 | L1 and (sensor with (appliance or vehicle)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| L3 | 400 | L2 and ((car or automobile or vehicle or truck or transport$6) with (mic or microphone)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| L4 | 230 | L3 and ((speech or voice or audio) with process$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| L5 | 155 | L4 and ((voice or speech) with (person or human or user)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| L6 | 155 | L5 and ((control$4 or operating or operat$2) with (device or actuator)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |

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|---|---|---|---|---|---|---|
| L7 | 129 | L6 and (wireless with network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2021/01/29 01:25 |
| L8 | 5,774 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L9 | 27,960 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L10 | 47,507 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L11 | 47,507 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L12 | 379 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L13 | 1,266 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L14 | 311 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L15 | 527 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L16 | 128 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L17 | 197 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L18 | 112 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L19 | 167 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L20 | 60,955 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L21 | 660 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L22 | 24,314 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L23 | 90,678 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L24 | 35,341 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L25 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |

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|---|---|---|---|---|---|---|
| L26 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L27 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L28 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L29 | 27,960 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L30 | 21,336 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L31 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L32 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L33 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L34 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L35 | 255,881 | L8 L9 L10 L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L30 L31 L32 L33 L34 | US-PGPUB; USPAT | OR | ON | 2021/01/29 01:26 |
| L36 | 1 | L35 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2021/01/29 01:26 |
| S1 | 1 | "13733634" | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:33 |
| S2 | 7,358 | (actuator with sensor with network) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:34 |
| S3 | 161 | (actuator with sensor with network with router) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:34 |
| S4 | 14 | (actuator with sensor with network with router with (car or vehicle)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:34 |
| S5 | 1,020 | (actuator with sensor with network with (car or vehicle)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:37 |
| S6 | 535 | S5 and (router or routing) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:38 |
| S7 | 147 | S5 and (NAT or DHCP) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:38 |
| S8 | 54 | S5 and (control adj2 logic) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:39 |
| S9 | 7,358 | (actuator with sensor with network) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:48 |
| S10 | 675 | S9 and (piezoelectric$6 or (piezo$1electric$6)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:49 |

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|---|---|---|---|---|---|---|
| S11 | 120 | S10 and (network with (routing or router)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:49 |
| S12 | 58 | S11 and (vehicle or car) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:49 |
| S13 | 21 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:08 |
| S14 | 21 | S13 and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:08 |
| S15 | 1 | S13 and (actuator same router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:08 |
| S16 | 200 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:11 |
| S17 | 119 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) same network | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:12 |
| S18 | 110 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) same network same sensor | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:12 |
| S19 | 76 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:12 |
| S20 | 68 | (actuator same router same ((vehicle or car or automobile) or (building))) same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:13 |
| S21 | 21 | (actuator same router same ((vehicle or car or automobile) same | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:15 |

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|---|---|---|---|---|---|---|
| | | (building))) same network same (sensor or control) same data | | | | |
| S22 | 21 | actuator same router same (vehicle or car or automobile) same building same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:15 |
| S23 | 47 | S20 XOR S22 | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:17 |
| S24 | 1 | (US-8195844-$).did. | USPAT | ADJ | ON | 2017/02/13 22:36 |
| S25 | 1 | "20090083589" | USPAT | ADJ | ON | 2017/02/13 22:36 |
| S36 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/14 00:34 |
| S37 | 520 | (home with network) same sensor same gateway same network | US-PGPUB | ADJ | ON | 2017/02/14 00:37 |
| S38 | 222 | (home with network) with sensor with gateway | US-PGPUB | ADJ | ON | 2017/02/14 00:37 |
| S39 | 4 | (home with network) with sensor with gateway with command | US-PGPUB | ADJ | ON | 2017/02/14 00:38 |
| S40 | 22 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:23 |
| S41 | 21 | S40 and (vehicle or vehical or automobile or car) | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:29 |
| S42 | 21 | S40 and (vehicle or vehical or automobile or car) and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:29 |
| S43 | 15 | S40 and (vehicle or vehical or automobile or car) and actuator and sensor and network and cellular and wireless | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:30 |

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|---|---|---|---|---|---|---|
| S44 | 15 | S40 and (coupled) | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:35 |
| S45 | 1 | S40 and (router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:36 |
| S46 | 832 | (vehicle or car) with router with (control or server) with network | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:37 |
| S47 | 11 | (vehicle or car) with router with (control or server) with network with actuator | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:37 |
| S48 | 2 | "20090198380" | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:42 |
| S49 | 1 | "20060217840" | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:42 |
| S50 | 7 | (US-20160062330-$ or US-20090198380-$ or US-20060217840-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$).did. | US-PGPUB | ADJ | ON | 2017/02/17 04:34 |
| S51 | 4 | S50 and (actuator with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:34 |
| S52 | 4 | S50 and (actuator) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:36 |
| S53 | 3 | "13404575" | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:38 |
| S54 | 2 | S50 and (sensor with router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:39 |
| S55 | 27 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$).did. or (US-8140658-$ or US-7844687-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:39 |

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|---|---|---|---|---|---|---|
| | | 7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S56 | 3 | S55 and (sensor with router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:39 |
| S57 | 319 | (actuator with sensor with router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:40 |
| S58 | 178 | (actuator NEAR9 sensor NEAr9 router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:40 |
| S59 | 125 | (actuator with sensor with router with (command or signal or transmi$6 or data)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:41 |
| S60 | 7 | (US-20160062330-$ or US-20090198380-$ or US-20060217840-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$).did. | US-PGPUB | ADJ | ON | 2017/02/17 21:05 |
| S61 | 2 | S60 and (router with (building or vehicle or car)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:06 |
| S62 | 2 | S60 and (router with (building or vehicle or car) with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:06 |
| S63 | 524 | (router with (building or vehicle or car) with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:06 |
| S64 | 96 | (router near9 (building or vehicle or car) near5 sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:07 |
| S65 | 28 | (router near9 (building or vehicle or car) near9 sensor near9 network) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:07 |
| S66 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/17 21:11 |
| S67 | 28 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |

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|---|---|---|---|---|---|---|
| | | 20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S68 | 27 | S67 and (control with (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |
| S69 | 22 | S67 and (control NEAR0 (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |
| S70 | 26 | S67 and (control NEAR9 (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |
| S71 | 9 | S67 and (command NEAR9 (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:15 |
| S72 | 2 | (US-20160062330-$ or US-20070283005-$).did. | US-PGPUB | ADJ | ON | 2017/02/20 06:05 |
| S73 | 1 | S72 and ((additional or extra or second or third) with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 06:29 |
| S74 | 28 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 06:30 |
| S75 | 12 | S74 and ((additional or extra or second or third) with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 06:31 |
| S76 | 2 | S72 and ((more) with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 06:32 |

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|---|---|---|---|---|---|---|
| S77 | 5 | S74 and piezoelectric | US-PGPUB | ADJ | ON | 2017/02/20 06:43 |
| S78 | 2 | S72 and (IP or address or internet or protocol) | US-PGPUB | ADJ | ON | 2017/02/20 06:56 |
| S79 | 2 | S74 and (DHCP and (IPv4 or IPv6)) | US-PGPUB | ADJ | ON | 2017/02/20 07:02 |
| S80 | 146 | (control$6 with (sensor or actuator) with network) and (DHCP and (IPv4 or IPv6)) | US-PGPUB | ADJ | ON | 2017/02/20 07:04 |
| S81 | 69 | (control$6 with (sensor or actuator) with network) and (DHCP with (IPv4 or IPv6)) | US-PGPUB | ADJ | ON | 2017/02/20 07:04 |
| S82 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/20 07:12 |
| S83 | 36 | S81 and zigbee | US-PGPUB | ADJ | ON | 2017/02/20 07:21 |
| S84 | 9 | S81 and zigbee and (temperature with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 07:22 |
| S85 | 36 | S81 and zigbee and (sensor) | US-PGPUB | ADJ | ON | 2017/02/20 07:22 |
| S86 | 15 | S81 and zigbee and (temperature) | US-PGPUB | ADJ | ON | 2017/02/20 07:22 |
| S87 | 12 | S81 and zigbee and (temperature) and (DHCP with assign$6) | US-PGPUB | ADJ | ON | 2017/02/20 07:23 |
| S88 | 3 | (US-20120253480-$ or US-20100071053-$ or US-20070283005-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 02:26 |
| S89 | 1 | S88 and (IP with assign$6) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:28 |
| S90 | 3 | S88 and (power) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:34 |
| S91 | 32 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:35 |

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|---|---|---|---|---|---|---|
| | | 20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S92 | 15,493 | (router with power) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:36 |
| S93 | 2 | S91 and (router with power) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:36 |
| S94 | 1,606 | (router with power with (case or box or inside or enclosure or casing)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:36 |
| S95 | 578 | (router NEAR9 power NEAR9 (case or box or inside or enclosure or casing)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:37 |
| S96 | 587 | (router NEAR9 power NEAR9 (housed or enclos$5 or case or box or inside or enclosure or casing)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:37 |
| S97 | 17 | (router NEAR9 power NEAR9 (housed or enclos$5 or case or box or inside or enclosure or casing) NEAR9 (AC or DC)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:37 |
| S98 | 17 | S91 and (light with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 03:05 |
| S99 | 0 | S88 and (light with (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:19 |
| S100 | 5 | S91 and (light with (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:19 |
| S101 | 5 | S91 and (light NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:20 |
| S102 | 128 | ((actuator with light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:22 |

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| S103 | 79 | ((actuator NEAR5 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:23 |
| S104 | 6 | (sensor with (actuator NEAR5 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:23 |
| S105 | 1 | (sensor with (actuator NEAR2 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:25 |
| S106 | 21 | ((actuator NEAR2 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:25 |
| S107 | 1 | S106 and invisible | US-PGPUB | ADJ | ON | 2017/02/21 03:37 |
| S108 | 1 | S106 and (nonvisible or "non-visible" or invisible) | US-PGPUB | ADJ | ON | 2017/02/21 03:38 |
| S109 | 12 | S106 and (LED or SSL or (discharge adj2 lamp) or (flourescent adj2 lamp) or PLED or (laser near5 diode)) | US-PGPUB | ADJ | ON | 2017/02/21 03:50 |
| S110 | 10 | S106 and (diode or SSL or (discharge adj2 lamp) or (flourescent adj2 lamp) or PLED or (laser near5 diode)) | US-PGPUB | ADJ | ON | 2017/02/21 03:50 |
| S111 | 10 | S106 and (diode or (discharge adj2 lamp) or (flourescent adj2 lamp) or PLED or (laser near5 diode)) | US-PGPUB | ADJ | ON | 2017/02/21 03:50 |
| S112 | 4 | ((actuator NEAR2 light NEAR5 (discharge or emit)) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 05:29 |
| S113 | 58 | (actuator NEAR2 light NEAR5 (discharge or emit)) | US-PGPUB | ADJ | ON | 2017/02/21 05:30 |
| S114 | 4 | (actuator NEAR2 light NEAR5 (discharge or emit) NEAR9 visible) | US-PGPUB | ADJ | ON | 2017/02/21 05:30 |
| S115 | 5 | (actuator NEAR2 light NEAR5 (discharge or emit) with sensor) | US-PGPUB | ADJ | ON | 2017/02/21 05:31 |
| S116 | 1,605 | ((Frequency adj3 Division adj3 Multiplexing) or FDM) with power with (communication or signal or transmission) | US-PGPUB | ADJ | ON | 2017/02/21 05:48 |

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| S117 | 1 | ((Frequency adj3 Division adj3 Multiplexing) or FDM) with power with (communication or signal or transmission) with band with splitter | US-PGPUB | ADJ | ON | 2017/02/21 05:48 |
| S118 | 34 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:54 |
| S119 | 13 | S118 and splitter | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:54 |
| S120 | 13 | S118 and splitter and frequency | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:54 |
| S121 | 1 | S118 and (splitter same frequency) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:55 |
| S122 | 234 | (power with data with splitter with frequency) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:56 |
| S123 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 10:03 |
| S124 | 462 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) | US-PGPUB | ADJ | ON | 2017/02/21 10:07 |

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| S125 | 261 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:08 |
| S126 | 302 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) | US-PGPUB | ADJ | ON | 2017/02/21 10:08 |
| S127 | 273 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:09 |
| S128 | 112 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and transformer and capacitor | US-PGPUB | ADJ | ON | 2017/02/21 10:10 |
| S129 | 88 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and transformer and capacitor and sensor | US-PGPUB | ADJ | ON | 2017/02/21 10:10 |
| S130 | 41 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and transformer and capacitor and sensor and (split or splits or splitter) | US-PGPUB | ADJ | ON | 2017/02/21 10:13 |
| S131 | 31 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or | US-PGPUB | ADJ | ON | 2017/02/21 10:15 |

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|---|---|---|---|---|---|---|
| | | (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and (transformer with capacitor with (windings or wirings or coils)) | | | | |
| S132 | 3 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and (transformer with capacitor with (windings or wirings or coils)) and sensor and (split or splits or splitter) | US-PGPUB | ADJ | ON | 2017/02/21 10:19 |
| S133 | 239 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near3 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:34 |
| S134 | 262 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (modula$4 near5 band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:35 |
| S135 | 45 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 modula$4 near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:35 |
| S136 | 1 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 modula$4 near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate or unique or other or another)) and | US-PGPUB | ADJ | ON | 2017/02/21 10:51 |

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|---|---|---|---|---|---|---|
| | | ((data or communication) near5 (channel or band or frequency)) | | | | |
| S137 | 57 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 11:00 |
| S138 | 0 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate)) and ((data or communication) near5 (channel or band or frequency)) and (split or splitter or divide) and (transformer with capacitor with (windings or coils)) | US-PGPUB | ADJ | ON | 2017/02/21 11:01 |
| S139 | 17 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate)) and ((data or communication) near5 (channel or band or frequency)) and (split or splitter or divide) and (transformer with capacitor) | US-PGPUB | ADJ | ON | 2017/02/21 11:01 |
| S140 | 1 | (US-20130308581-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 11:09 |
| S141 | 1 | (US-20110118888-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 11:28 |
| S142 | 2 | (US-20160062330-$ or US-20070283005-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 11:49 |
| S143 | 0 | S142 and appliance | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 11:49 |
| S144 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 12:06 |
| S145 | 205 | (yehuda and binder).in. | US-PGPUB | ADJ | ON | 2017/02/21 12:24 |
| S146 | 26 | (benjamin and maytal).in. | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |

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| S147 | 26 | (may and patents).as. | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S148 | 25 | (may and patents).aanm. | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S149 | 8 | S147 and S148 | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S150 | 1 | S145 and S146 | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S151 | 43 | S147 or S148 | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S152 | 230 | S145 or S146 | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S153 | 230 | S151 or S152 | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S154 | 17 | S153 and piezoelectric.clm. | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S155 | 1 | S153 and (vehicle and router and actuator).clm. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S156 | 7,130 | H04L67/12.cpc. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S157 | 993 | 348/77.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S158 | 374 | 700/28.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S159 | 148 | 700/22.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:28 |
| S160 | 1,455 | 709/218.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:28 |
| S161 | 2 | "20130080642" | US-PGPUB; USPAT | ADJ | ON | 2017/06/30 12:25 |
| S162 | 1 | "14499166" | US-PGPUB; USPAT | ADJ | ON | 2017/06/30 12:27 |
| S163 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$).did. | US-PGPUB | ADJ | ON | 2017/07/05 10:43 |

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| S164 | 2 | S163 and (sensor and actuator and router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:43 |
| S165 | 36 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:44 |
| S166 | 3 | S165 and (sensor and actuator and router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:44 |
| S168 | 7 | S165 and (sensor same network same router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:45 |
| S169 | 36 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:20 |

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| | | 20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S170 | 7 | S169 and (sensor same network same router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:20 |
| S171 | 3 | S170 and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:20 |
| S172 | 24 | S169 and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:21 |
| S173 | 2 | (US-20160062330-$ or US-20070283005-$).did. | US-PGPUB | OR | OFF | 2017/07/19 19:14 |
| S174 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 00:24 |
| S175 | 1 | "20120079149" | US-PGPUB | OR | OFF | 2017/07/20 00:29 |
| S176 | 1 | "20120079149" | US-PGPUB | OR | OFF | 2017/07/20 06:37 |
| S177 | 1 | S176 and ((sensor or actuator) with router) | US-PGPUB | OR | OFF | 2017/07/20 06:37 |
| S178 | 1 | S176 and (router) | US-PGPUB | OR | OFF | 2017/07/20 06:37 |
| S179 | 0 | S176 and (commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:41 |
| S180 | 37 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US- | US-PGPUB; USPAT | OR | OFF | 2017/07/20 06:41 |

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| | | 20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S181 | 1 | S180 and (commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:41 |
| S182 | 2 | (actuator with commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:42 |
| S183 | 25 | (sensor with commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:42 |
| S184 | 9 | (sensor NEAR9 commands NEAR9 router) | US-PGPUB | OR | OFF | 2017/07/20 06:42 |
| S185 | 3 | S184 and actuator | US-PGPUB | OR | OFF | 2017/07/20 06:54 |
| S186 | 3 | (US-20160062330-$ or US-20100071053-$ or US-20070283005-$).did. | US-PGPUB | OR | OFF | 2017/07/20 09:43 |
| S192 | 3 | (US-20160062330-$ or US-20100071053-$ or US-20070283005-$).did. | US-PGPUB | OR | OFF | 2017/07/20 09:45 |
| S193 | 3 | S192 and address | US-PGPUB | OR | OFF | 2017/07/20 09:45 |
| S194 | 0 | S192 and ((unique or individual or distinct or separate) with address) | US-PGPUB | OR | OFF | 2017/07/20 09:46 |
| S195 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US- | US-PGPUB | OR | OFF | 2017/07/20 12:16 |

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| | | 20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | | | | |
| S200 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 12:17 |
| S201 | 12 | S200 and power | US-PGPUB | OR | OFF | 2017/07/20 12:17 |
| S202 | 2 | S200 and (power with (socket or port or connector)) | US-PGPUB | OR | OFF | 2017/07/20 12:17 |
| S203 | 3 | S200 and (power with (AC or DC)) | US-PGPUB | OR | OFF | 2017/07/20 12:18 |
| S204 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S205 | 0 | S204 and medical | USPAT | OR | OFF | 2017/07/20 12:23 |
| S206 | 0 | S204 and medicine | USPAT | OR | OFF | 2017/07/20 12:23 |
| S207 | 0 | S204 and power | USPAT | OR | OFF | 2017/07/20 12:23 |
| S208 | 0 | S204 and actuator | USPAT | OR | OFF | 2017/07/20 12:23 |
| S209 | 14 | S200 and sensor | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S210 | 12 | S200 and power | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S212 | 1 | S204 and medical | US-PGPUB | OR | OFF | 2017/07/20 12:23 |

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|---|---|---|---|---|---|---|
| S213 | 5 | S201 and (AC or DC) | US-PGPUB | OR | OFF | 2017/07/20 12:27 |
| S214 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 14:03 |
| S215 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 15:03 |
| S220 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 15:05 |
| S225 | 5 | S220 and battery | US-PGPUB | OR | OFF | 2017/07/20 15:06 |
| S226 | 12 | S220 and network | US-PGPUB | OR | OFF | 2017/07/20 15:06 |
| S227 | 3 | S220 and (data with paths) | US-PGPUB | OR | OFF | 2017/07/20 15:06 |
| S228 | 2 | S220 and (router with port) | US-PGPUB | OR | OFF | 2017/07/20 15:16 |
| S229 | 8 | S220 and (embed or embedded or inside) | US-PGPUB | OR | OFF | 2017/07/20 15:40 |
| S230 | 2 | S220 and ((embed or embedded or inside) with router) | US-PGPUB | OR | OFF | 2017/07/20 15:49 |
| S231 | 5 | S220 and ((embed or embedded or inside) with sensor) | US-PGPUB | OR | OFF | 2017/07/20 15:50 |
| S232 | 5 | S220 and ((embed or embedded or inside or contained) with sensor) | US-PGPUB | OR | OFF | 2017/07/20 15:51 |

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|---|---|---|---|---|---|---|
| S233 | 2 | S220 and ((embed or embedded or inside or contained) with router) | US-PGPUB | OR | OFF | 2017/07/20 15:51 |
| S234 | 5 | S220 and ((router or sensor) with integrat$4) | US-PGPUB | OR | OFF | 2017/07/20 15:51 |
| S235 | 12 | S220 and (embedded or embed or integrat$4) | US-PGPUB | OR | OFF | 2017/07/20 15:56 |
| S236 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$).did. | US-PGPUB | OR | OFF | 2017/07/20 19:05 |
| S242 | 13 | S236 and device | US-PGPUB | OR | OFF | 2017/07/20 19:06 |
| S243 | 0 | S236 and (routing with phone) | US-PGPUB | OR | OFF | 2017/07/20 19:08 |
| S244 | 2 | S236 and (router with phone) | US-PGPUB | OR | OFF | 2017/07/20 19:08 |
| S245 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 19:22 |
| S246 | 1 | S245 and actuator | US-PGPUB | OR | OFF | 2017/07/20 19:22 |
| S247 | 1,063 | ISM near2 radio near2 band | US-PGPUB | OR | OFF | 2017/07/20 19:44 |
| S248 | 496 | industrial near3 scientific near3 radio near3 band | US-PGPUB | OR | OFF | 2017/07/20 19:44 |
| S249 | 1 | (industrial near3 scientific near3 radio near3 band) near5 WAN | US-PGPUB | OR | OFF | 2017/07/20 19:45 |
| S250 | 3 | (industrial near3 scientific near3 radio near3 band) with WAN | US-PGPUB | OR | OFF | 2017/07/20 19:46 |
| S251 | 0 | (industrial near3 scientific near3 radio near3 band) near5 internet | US-PGPUB | OR | OFF | 2017/07/20 19:46 |
| S252 | 14 | (industrial near3 scientific near3 radio near3 band) near5 network | US-PGPUB | OR | OFF | 2017/07/20 19:46 |
| S253 | 1 | S236 and (WAN with antenna) | US-PGPUB | OR | OFF | 2017/07/20 19:56 |
| S254 | 1 | S236 and (WAN with modem) | US-PGPUB | OR | OFF | 2017/07/20 19:59 |

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|---|---|---|---|---|---|---|
| S255 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 20:19 |
| S256 | 157 | (BINDER and Yehuda).in. | USPAT | OR | OFF | 2017/07/20 20:26 |
| S257 | 10 | (MAYTAL and Benjamin).in. | USPAT | OR | OFF | 2017/07/20 20:26 |
| S258 | 4,181 | H04L67/12.cpc. | USPAT | OR | OFF | 2017/07/20 20:27 |
| S259 | 41 | (B60Y2200/30 G06Q2240/00).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S260 | 41 | (B60Y2200/30 or G06Q2240/00).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S261 | 15 | (B60Y2200/30).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S262 | 26 | (G06Q2240/00).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S263 | 5,119 | (G01C21/00 or B60Y2200/90 or B60Y2200/50 or B60Y2200/40 or G08G1/00 or B60Y2200/13 or B60Y2200/126 or B60Y2200/12 or B60Y2200/11 or B60K31/18 or B60K31/00 or G07C5/008).cpc. | USPAT | OR | OFF | 2017/07/20 20:31 |
| S264 | 10,730 | (348/77 or 348/143 or 370/276 or 700/22 or 700/28 or 701/2 or 701/31.4 or 709/218).ccls. | USPAT | OR | OFF | 2017/07/20 20:33 |
| S265 | 11 | (may and patents).as. | USPAT | OR | OFF | 2017/07/20 20:33 |
| S266 | 6 | (may and patents).aanm. | USPAT | OR | OFF | 2017/07/20 20:34 |
| S267 | 0 | "15657163" | US-PGPUB; USPAT | ADJ | ON | 2017/09/18 11:52 |
| S268 | 11 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$).did. | US-PGPUB | OR | ON | 2017/09/18 12:22 |
| S269 | 7 | S268 and voice | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:22 |
| S270 | 8 | S268 and (audio or human) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:23 |

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|---|---|---|---|---|---|---|
| S271 | 42 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:24 |
| S272 | 25 | S271 and voice | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:25 |
| S273 | 2 | S271 and ((mic or microphone) with voice) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:27 |
| S274 | 31 | S271 and (person or human) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:38 |
| S275 | 17 | (control$4 or operat$4) with (actuator with (human) with voice) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:43 |
| S276 | 7,612 | (control$4 or operat$4) with (actuator with voice) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:55 |

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|---|---|---|---|---|---|---|
| S277 | 5 | (control$4 or operat$4) NEAR9 (actuator with voice) NEAR9 network | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:55 |
| S278 | 10 | 2009/0089065 | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:03 |
| S279 | 2 | "20090089065" | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:03 |
| S280 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/19 13:12 |
| S281 | 6 | S280 and building | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:12 |
| S282 | 0 | "15657163" | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:13 |
| S286 | 2 | "13733634" | US-PGPUB; USPAT | ADJ | ON | 2017/09/19 13:13 |
| S287 | 0 | S286 and (client adj2 device) | US-PGPUB; USPAT | ADJ | ON | 2017/09/19 13:13 |
| S288 | 5 | S280 and ((speech or voice) with (command$4 or control$4)) | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:17 |
| S289 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/27 04:43 |
| S290 | 7 | S289 and (mic or microphone) | US-PGPUB; USPAT | OR | ON | 2017/09/27 04:43 |
| S291 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US- | US-PGPUB | OR | ON | 2017/09/28 01:25 |

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|---|---|---|---|---|---|---|
| | | 20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | | | | |
| S292 | 7 | S291 and (mic or microphone or micro$1phone) | US-PGPUB; USPAT | OR | ON | 2017/09/28 01:25 |
| S293 | 43 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:46 |

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|---|---|---|---|---|---|---|
| S294 | 3,281,126 | S293 and ("same" NEAR4 device) or inside | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:46 |
| S295 | 3,281,126 | S293 and ("same" NEAR4 device) or inside | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:46 |
| S296 | 28 | S293 and (("same" NEAR4 device) or inside) | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:47 |
| S297 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/28 08:51 |
| S298 | 5 | S297 and actuator | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:51 |
| S299 | 7 | S297 and algorithm | US-PGPUB; USPAT | OR | ON | 2017/09/28 09:06 |
| S300 | 13 | S297 and sensor | US-PGPUB; USPAT | OR | ON | 2017/09/28 09:28 |
| S301 | 3 | S297 and (sensor with light) | US-PGPUB; USPAT | OR | ON | 2017/09/28 09:39 |
| S302 | 3 | (US-20070283005-$ or US-20090089065-$ or US-20150046582-$).did. | US-PGPUB | OR | ON | 2017/09/29 04:46 |
| S303 | 1 | S302 and (actuator with physical) | US-PGPUB; USPAT | OR | ON | 2017/09/29 04:47 |
| S304 | 2 | S302 and (actuator) | US-PGPUB; USPAT | OR | ON | 2017/09/29 04:47 |
| S305 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/29 04:53 |

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|---|---|---|---|---|---|---|
| S306 | 7 | S305 and (mic or microphones) | US-PGPUB; USPAT | OR | ON | 2017/09/29 04:53 |
| S307 | 10 | S305 and (address) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:22 |
| S308 | 6 | S305 and (zigbee) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:30 |
| S309 | 5 | S305 and ("802.11") | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:33 |
| S310 | 4 | S305 and (ISM) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:45 |
| S311 | 2 | S305 and (CDMA) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:48 |
| S312 | 3 | S305 and (UMTS or GSM) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:49 |
| S313 | 8 | S305 and cellular | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:49 |
| S314 | 6 | S305 and (HSPA or LTE or MBWA or "802.2" or GSM or WiMax) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:54 |
| S315 | 1 | S305 and (applicance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:23 |
| S316 | 43 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US- | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:26 |

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|---|---|---|---|---|---|---|
| | | 20110118888-$ or US-20120079149-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S317 | 14 | S316 and (applicance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:26 |
| S318 | 1,015 | network with sensor with (applicance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:28 |
| S319 | 22 | S316 and (appliance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:28 |
| S320 | 21 | S316 and (appliance or kitchen) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:29 |
| S321 | 3 | S316 and (kitchen) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:29 |
| S322 | 12 | (control$4) with network with kitchen with appliance with (speech or voice) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:33 |
| S323 | 1 | (US-20170272316-$).did. | US-PGPUB | OR | ON | 2017/09/29 06:36 |
| S324 | 12 | (US-20160062330-$ or US-20090198380-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$).did. | US-PGPUB | OR | ON | 2017/09/29 08:34 |
| S325 | 3 | S324 and (infrared or infra$1red or gamma or xrays or x$1rays) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:34 |
| S326 | 0 | S324 and (actuat$4 with motion) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:40 |

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|---|---|---|---|---|---|---|
| S327 | 4 | S324 and (actuat$4) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:41 |
| S328 | 2 | S324 and (actuat$4 with (sound or noise or volume or radio or music)) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:49 |
| S329 | 2 | S324 and (actuat$4 with (sound or noise or volume or audio or radio or music)) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:49 |
| S330 | 4 | S324 and (actuat$4 same (sound or noise or volume or audio or radio or music)) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:49 |
| S331 | 0 | "15657163" | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:02 |
| S332 | 5,777 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:03 |
| S333 | 12,682 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:03 |
| S334 | 25,214 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S335 | 25,214 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S336 | 288 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S337 | 862 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S338 | 194 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S339 | 313 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S340 | 35 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S341 | 110 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S342 | 13 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S343 | 91 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S344 | 36,907 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S345 | 155 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S346 | 9,132 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S348 | 15,985 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |

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|---|---|---|---|---|---|---|
| S349 | 40 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S350 | 42 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S351 | 381 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S352 | 39 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S353 | 13,516 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S354 | 5,776 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S355 | 41 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S356 | 387 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S357 | 48 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S358 | 44 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S359 | 0 | (fire and eye).aanm. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S360 | 140 | (fireeye).as. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S361 | 113 | (fireeye).aanm. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S362 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S363 | 674 | (home with network) same sensor same gateway same network | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S364 | 293 | (home with network) with sensor with gateway | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S365 | 5 | (home with network) with sensor with gateway with command | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S366 | 22 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |

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|---|---|---|---|---|---|---|
| | | 20110035491-$ or US-20150046582-$ or US-20160062330-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S367 | 21 | S366 and (vehicle or vehical or automobile or car) | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S368 | 21 | S366 and (vehicle or vehical or automobile or car) and actuator | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S369 | 15 | S366 and (vehicle or vehical or automobile or car) and actuator and sensor and network and cellular and wireless | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S370 | 15 | S366 and (coupled) | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S371 | 1 | S366 and (router) | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S372 | 1,030 | (vehicle or car) with router with (control or server) with network | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S373 | 18 | (vehicle or car) with router with (control or server) with network with actuator | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S374 | 2 | "20090198380" | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S375 | 1,865 | S359 S360 S361 S362 S363 S364 S365 S366 S367 S368 S369 S370 S371 S372 S373 S374 | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:44 |
| S376 | 13,516 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S377 | 27,138 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S378 | 27,138 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S379 | 293 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S380 | 889 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S381 | 202 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S382 | 329 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S383 | 37 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |

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|---|---|---|---|---|---|---|
| S384 | 113 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S385 | 17 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S386 | 94 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S387 | 38,949 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S388 | 183 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S389 | 10,308 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S390 | 44,418 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S391 | 17,401 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S392 | 127,924 | S376 S377 S378 S379 S380 S381 S382 S383 S384 S385 S386 S387 S388 S389 S390 S391 | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S393 | 2 | "15657163" | US-PGPUB; USPAT | ADJ | ON | 2018/06/15 17:22 |
| S394 | 1 | (US-20170331899-$).did. | US-PGPUB | OR | OFF | 2018/06/15 17:22 |
| S395 | 1 | (US-20170331899-$).did. | US-PGPUB | OR | OFF | 2018/06/17 15:00 |
| S396 | 1 | S395 and (voice with algorithm) | US-PGPUB | OR | OFF | 2018/06/17 15:00 |
| S397 | 1 | (US-20170331899-$).did. | US-PGPUB | OR | OFF | 2018/06/17 16:04 |
| S398 | 1 | S397 and (sensor with convection) | US-PGPUB | OR | OFF | 2018/06/17 16:04 |
| S399 | 12 | (US-20160062330-$ or US-20090198380-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$).did. | US-PGPUB | OR | OFF | 2018/06/18 06:55 |
| S400 | 0 | S399 and (voice or audio) | USPAT | OR | OFF | 2018/06/18 06:55 |

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|---|---|---|---|---|---|---|
| S401 | 0 | S399 and (voice or audio) | USPAT | OR | ON | 2018/06/18 06:55 |
| S402 | 0 | S399 and (voice or audio) | USPAT | OR | OFF | 2018/06/18 06:55 |
| S403 | 0 | S399 and audio | USPAT | OR | OFF | 2018/06/18 06:56 |
| S404 | 0 | S399 and (voice or audio) | USPAT | OR | OFF | 2018/06/18 06:56 |
| S405 | 9 | S399 and (voice or audio) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 06:56 |
| S406 | 5 | S399 and ((voice or audio or speech) with (command or control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 06:58 |
| S407 | 6 | S399 and (mic or microphone) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:02 |
| S408 | 42 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$ or US-20130308581-$).did. or (US-20110118888-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$ or US-20170272316-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US- | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:16 |

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|---|---|---|---|---|---|---|
| | | 6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S409 | 18 | S408 and (mic or microphone) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:16 |
| S410 | 7 | S408 and ((voice or audio or speech) with (command or control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:16 |
| S411 | 5 | S408 and ((voice or audio or speech) NEAR9 (command or control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:17 |
| S412 | 0 | S408 and ((speech with control with process) same (external with server)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:20 |
| S413 | 1 | S408 and ((speech with control with process) same (external)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:21 |
| S414 | 14 | S408 and (( control with process)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:21 |
| S415 | 7 | S408 and (((speech or voice or audio) with control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:22 |
| S416 | 7 | S415 and wireless | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:28 |
| S417 | 11 | S399 and (wireless) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:28 |
| S418 | 2 | "20050273505" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:53 |
| S419 | 2 | "20060212194" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:53 |
| S420 | 8 | ("20050273505" \| "20060212194" \| "20070096565" \| "20070176740" \| "20080129475" \| "20080136670" \| "20100207754" \| "20130139440").PN. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:55 |
| S421 | 0 | S420 and appliance | USPAT | OR | OFF | 2018/06/18 09:55 |
| S422 | 3 | ("20080307075" \| "20090089065" \| "20170272316").PN. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:55 |
| S423 | 0 | S422 and appliance | USPAT | OR | OFF | 2018/06/18 09:55 |
| S424 | 0 | S420 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:56 |
| S425 | 1 | S422 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:56 |
| S426 | 21 | "8447843" | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |

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|---|---|---|---|---|---|---|
| S427 | 1 | "8447843".pn. | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S428 | 3 | "20080077425" | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S429 | 0 | S428 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S430 | 0 | S428 and kitchen | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:59 |
| S431 | 21 | ("20030009271" \| "20030105389" \| "20060111825" \| "20070021847" \| "20070198144" \| "20070283005" \| "20080100428" \| "20090138136" \| "20090198380" \| "20090224906" \| "20100030421" \| "20100071053" \| "20100211258" \| "20110153149" \| "20120079149" \| "20130091279" \| "20130308581" \| "20140215491" \| "20150046582" \| "20160062330" \| "20160344745").PN. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:59 |
| S432 | 7 | S431 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:59 |
| S433 | 134 | ("0000001" \| "0000002" \| "0000030" \| "0000058" \| "0000065" \| "0000105" \| "0000135" \| "0000158" \| "0002002" \| "0006263" \| "0006324" \| "0006865" \| "0040919" \| "0064736" \| "0066069" \| "0089847" \| "0500145" \| "0732666" \| "120050044119" \| "120050247573" \| "120070112939" \| "120080263117" \| "120100201531" \| "120110041604" \| "120110222726" \| "14248123" \| "15010399" \| "15134887" \| "15710833" \| "15724456" \| "15987154" \| "16109331" \| "16188777" \| "16329160" \| "16501857" \| "16504942" \| "16549616" \| "16931596" \| "17213061" \| "17317815" \| "17321936" \| "17414186" \| "17598942" \| "17614305" \| "17617729" \| "1784721" \| "20020009383" \| "20020010938" \| "20030092261" \| "20030099228" \| "20040182167" \| "20050000120" \| "20050010957" \| "20050180561" \| "20070132725" \| "20090272193" \| "20100000218" \| "20100162815" \| "20120268373" \| "2171640" \| | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:01 |

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|---|---|---|---|---|---|---|
| | | "3184842" \| "382264836" \| "4019073" \| "4047187" \| "4243631" \| "4317991" \| "4351192" \| "4367027" \| "4414537" \| "4434451" \| "4638364" \| "4759220" \| "4796891" \| "4853884" \| "4857273" \| "4905176" \| "5046022" \| "5047952" \| "5105087" \| "5138459" \| "5274631" \| "5291234" \| "5349129" \| "5386103" \| "5402170" \| "5454043" \| "5488429" \| "5510765" \| "5511547" \| "5578877" \| "5621455" \| "56344119" \| "5652849" \| "5666159" \| "5781650" \| "5818975" \| "5835616" \| "5870138" \| "5896443" \| "5930201" \| "5948965" \| "5962786" \| "5978519" \| "5991456" \| "6069899" \| "6097470" \| "6101271" \| "6128397" \| "6132281" \| "6149312" \| "6151073" \| "6211636393148" \| "6216160" \| "6282317" \| "6285761" \| "6301370" \| "6404900" \| "6407777" \| "6421468" \| "6437576" \| "6452499" \| "6459436" \| "6473199" \| "6476372" \| "6504951" \| "6526161" \| "6535243" \| "6549234" \| "6552743" \| "6670125" \| "6693296216311" \| "6694316" \| "6714021" \| "6747258" \| "67883325" \| "6806722" \| "6820225" \| "6844897" \| "6862353" \| "6895803" \| "6940545" \| "6967565" \| "7010050" \| "7124157" \| "7239577" \| "7256466" \| "7289645" \| "7315630" \| "7327385" \| "7342212" \| "7432952" \| "7466866" \| "7499239" \| "7508961" \| "7653573" \| "7688036" \| "7692320" \| "7716985" \| "7821541" \| "7843336" \| "8016205" \| "8115646" \| "8180492" \| "8214070" \| "95578755" \| "RE00031" \| "RE33682" \| "T000005" \| "T009255" \| "T092876" \| "T746684").PN. | | | | |
| S434 | 4 | S433 and appliance | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:01 |
| S435 | 4 | S433 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:02 |
| S436 | 1 | "20040267385" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:03 |

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|---|---|---|---|---|---|---|
| S437 | 1 | S422 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:04 |
| S438 | 0 | S428 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:04 |
| S439 | 5 | S431 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:04 |
| S440 | 44 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$ or US-20130308581-$).did. or (US-20110118888-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$ or US-20170272316-$ or US-20080077425-$ or US-20040267385-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:05 |
| S441 | 8 | S440 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:05 |
| S442 | 1 | S440 and (stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:05 |

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|---|---|---|---|---|---|---|
| S443 | 22 | S440 and (appliance or stove or refrigerator or air$1conditioner or microwave) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:21 |
| S444 | 15 | S440 and (stove or refrigerator or air$1conditioner or microwave) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:21 |
| S445 | 6 | S440 and (stove or refrigerator or air adj conditioner) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:22 |
| S446 | 1 | S440 and (burner or stove or oven) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:26 |
| S447 | 0 | S399 and (burner or stove or oven) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:26 |
| S448 | 0 | S399 and (burner or stove or oven) | US-PGPUB; USPAT | OR | ON | 2018/06/18 10:26 |
| S449 | 1 | S440 and (burner or stove or oven) | US-PGPUB; USPAT | OR | ON | 2018/06/18 10:26 |
| S450 | 3 | (US-20160062330-$ or US-20070283005-$ or US-20090089065-$).did. | US-PGPUB | OR | OFF | 2018/06/18 11:23 |
| S451 | 1 | (US-20080077425-$).did. | US-PGPUB | OR | OFF | 2018/06/18 11:27 |
| S452 | 0 | S451 and IoT | US-PGPUB; USPAT | OR | ON | 2018/06/18 11:27 |
| S453 | 44 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$ or US-20130308581-$).did. or (US- | US-PGPUB; USPAT | OR | OFF | 2018/06/18 11:27 |

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|---|---|---|---|---|---|---|
| | | 20110118888-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$ or US-20170272316-$ or US-20080077425-$ or US-20040267385-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S457 | 1 | S453 and IoT | US-PGPUB; USPAT | OR | ON | 2018/06/18 11:28 |
| S458 | 1 | S450 and (LAN or (local adj2 area)) | US-PGPUB | OR | ON | 2018/06/18 11:32 |
| S459 | 227 | (yehuda and binder).in. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S460 | 31 | (benjamin and maytal).in. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S461 | 26 | (may and patents).as. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S462 | 39 | (may and patents).aanm. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S463 | 57 | S461 or S462 | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S464 | 253 | S459 or S460 | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S465 | 253 | S463 or S464 | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S466 | 2 | S465 and (vehicle and router and actuator).clm. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S467 | 9,404 | H04L67/12.cpc. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S468 | 997 | 348/77.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S469 | 374 | 700/28.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S470 | 148 | 700/22.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S471 | 1,455 | 709/218.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S472 | 12,341 | S467 or S468 or S469 or S470 or S471 | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |

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|---|---|---|---|---|---|---|
| S473 | 5,776 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S474 | 14,669 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S475 | 29,542 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S476 | 29,542 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S477 | 300 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S478 | 915 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S479 | 217 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S480 | 339 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S481 | 42 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S482 | 128 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S483 | 23 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S484 | 104 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S485 | 41,547 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S486 | 204 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S487 | 11,825 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S488 | 49,737 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S489 | 19,313 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S490 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S491 | 55 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S492 | 395 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S493 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S494 | 14,669 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |

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| S495 | 19,392 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S496 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S497 | 395 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S498 | 55 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S499 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S500 | 159,408 | S473 S474 S475 S476 S477 S478 S479 S480 S481 S482 S483 S484 S485 S486 S487 S488 S489 S490 S491 S492 S493 S494 S495 S496 S497 S498 S499 | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S501 | 10 | S500 and (vehicle and router and actuator).clm. | US-PGPUB; USPAT | ADJ | ON | 2018/06/18 13:01 |
| S502 | 2 | "15657163" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 13:02 |
| S503 | 1 | S500 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2018/06/18 13:02 |
| S504 | 5,775 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S505 | 16,337 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S506 | 30,893 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S507 | 30,893 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S508 | 307 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S509 | 964 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S510 | 228 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S511 | 372 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S512 | 47 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S513 | 139 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S514 | 28 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |

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|---|---|---|---|---|---|---|
| S515 | 117 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S516 | 43,002 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S517 | 267 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S518 | 12,674 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S519 | 52,730 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S520 | 20,427 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S521 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S522 | 56 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S523 | 396 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S524 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S525 | 16,337 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S526 | 19,576 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S527 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S528 | 396 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S529 | 56 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S530 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S531 | 167,168 | S504 S505 S506 S507 S508 S509 S510 S511 S512 S513 S514 S515 S516 S517 S518 S519 S520 S521 S522 S523 S524 S525 S526 S527 S528 S529 S530 | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S532 | 1 | S531 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2018/08/30 15:54 |
| S533 | 7 | (US-20160062330-$ or US-20070283005-$ or US-20100071053-$ or US-20130091279-$ or US-20080307075-$ or US- | US-PGPUB | OR | OFF | 2018/08/31 12:30 |

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|---|---|---|---|---|---|---|
| | | 20090089065-$ or US-20170272316-$).did. | | | | |
| S534 | 90 | ((((vocal voice) near2 (instruction recogni$4 command)) with (instruct$4 teach$4 guid$4 control$4) with (arm actuator cylinder effector end-effector slide servo stepper shuttle loader unloader axis motion robot gantry turntable lifter elevator tool "pick and place")) same server) and @ad<"20120109" | US-PGPUB; USPAT | OR | ON | 2018/12/19 15:08 |
| S535 | 3 | "15657163" | US-PGPUB | OR | OFF | 2018/12/30 19:14 |
| S536 | 5 | "7019646".pn. "20120112970" "20120303150" | US-PGPUB; USPAT | OR | ON | 2020/12/16 16:01 |
| S537 | 15 | ("20010024163" \| "20040217857" \| "20050154494" \| "20050226201" \| "20060265195" \| "20070169080" \| "20070262847" \| "20080221715" \| "20090042533" \| "20090051551" \| "20110082599" \| "20120229283" \| "20120236748" \| "20130048319" \| "20130121239").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 16:03 |
| S538 | 15 | ("20010024163" \| "20040217857" \| "20050154494" \| "20050226201" \| "20060265195" \| "20070169080" \| "20070262847" \| "20080221715" \| "20090042533" \| "20090051551" \| "20110082599" \| "20120229283" \| "20120236748" \| "20130048319" \| "20130121239").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 18:57 |
| S539 | 14 | S538 and sensor | US-PGPUB; USPAT | OR | ON | 2020/12/16 18:57 |
| S540 | 29 | ("0821344" \| "10026116" \| "10213810" \| "10232408" \| "10239094" \| "20010025349" \| "20010041982" \| "20060220830" \| "20070283005" \| "20080031139" \| "20080130520" \| "20090046715" \| "20090076827" \| "20090271002" \| "20100211359" \| "20100298957" \| "20110148651" \| "20110170377" \| "20110298301" \| "20130235197" \| "20150138333" \| "20150324706" \| "20150362954" \| "20180137462" \| "6546297" \| "6813221" \| "9165320" \| "9821344" \| "9908153").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |

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|---|---|---|---|---|---|---|
| S541 | 8 | S540 and (sensor and actuator) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |
| S542 | 8 | S540 and (sensor and fire) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |
| S543 | 3 | S541 and S542 | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |
| S544 | 4 | ("20020198626" \| "20050216121" \| "20090055019" \| "20120034904").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:17 |
| S545 | 2 | S544 and (sensor and actuator) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:18 |
| S546 | 30 | ("20020112726" \| "20060206155" \| "20070208390" \| "20080291036" \| "20090005720" \| "20090033522" \| "20090105605" \| "20090189981" \| "20100039253" \| "20100100004" \| "20100187832" \| "20100195601" \| "20100281884" \| "20110034912" \| "20110047874" \| "20110050216" \| "20110282168" \| "20120130203" \| "20120179067" \| "20120190292" \| "20120265026" \| "20130151200" \| "20130211858" \| "20150222852" \| "20180242859" \| "4472656" \| "5077512" \| "5696879" \| "8244405" \| "8615374").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:23 |
| S548 | 9 | S546 and (sensor and actuator) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:24 |
| S549 | 8 | S546 and (sensor and fire) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:24 |
| S550 | 15 | ("20010024163" \| "20040217857" \| "20050154494" \| "20050226201" \| "20060265195" \| "20070169080" \| "20070262847" \| "20080221715" \| "20090042533" \| "20090051551" \| "20110082599" \| "20120229283" \| "20120236748" \| "20130048319" \| "20130121239").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:26 |
| S551 | 12 | (US-20160062330-$ or US-20070283005-$ or US-20100071053-$ or US-20130091279-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$ or US-20050154494-$ or US-20130121239-$ or US-20010024163-$ or US- | US-PGPUB; USPAT | OR | ON | 2020/12/18 02:34 |

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| S553 | 4 | S551 and (microphon$2 or mic) | US-PGPUB; USPAT | OR | ON | 2020/12/18 02:35 |
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| S555 | 5,774 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S556 | 27,508 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S557 | 46,791 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S558 | 46,791 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S559 | 379 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S560 | 1,246 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S561 | 309 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S562 | 520 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S563 | 122 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S564 | 195 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S565 | 105 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S566 | 165 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S567 | 60,121 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S568 | 637 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S569 | 23,829 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S570 | 88,949 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S571 | 34,665 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S572 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S573 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |

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| S574 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S575 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S576 | 27,508 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S577 | 21,277 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S578 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S579 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S580 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S581 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S582 | 252,008 | S555 S556 S557 S558 S559 S560 S561 S562 S563 S564 S565 S566 S567 S568 S569 S570 S571 S572 S573 S574 S575 S576 S577 S578 S579 S580 S581 | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| S583 | 1 | S582 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2020/12/18 11:17 |
| S584 | 812 | ((speech or sound) with voice with actuator) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:24 |
| S585 | 54,241 | ((speech or sound or voice) with actuator) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:25 |
| S586 | 3,641 | S585 and (sensor with (appliance or vehicle)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:25 |
| S587 | 391 | S586 and ((car or automobile or vehicle or truck or transport$6) with (mic or microphone)) | US-PGPUB; USPAT; USOCR; | OR | ON | 2020/12/18 11:26 |

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|---|---|---|---|---|---|---|
| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| S588 | 224 | S587 and ((speech or voice or audio) with process$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:27 |
| S589 | 90 | S588 and ((voice or speech) with (person or human)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:27 |
| S590 | 151 | S588 and ((voice or speech) with (person or human or user)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:27 |
| S591 | 151 | S590 and ((control$4 or operating or operat$2) with (device or actuator)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:29 |
| S592 | 125 | S591 and (wireless with network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:31 |

**EAST Search History (Interference)**

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1/29/2021 1:28:52 AM
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# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 41630388 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 13-JAN-2021 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 11:24:17 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | no |

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Amendment/Req. Reconsideration-After Non-Final Reject | 40C-Non-Final-OA-Response.pdf | 42875<br>501abe6dfebfa3387eda73994f22891e68bb b939 | no | 6 |

**Warnings:**

| Information: | |
|---|---|
| Total Files Size (in bytes): | 42875 |

**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

ATTY.'S DOCKET: BINDER-014-US3

| | | |
|---|---|---|
| In re Application of: | ) | Confirmation No. 1088 |
| | ) | |
| Yehuda BINDER | ) | Art Unit: 2456 |
| | ) | |
| Appln. No.: 15/657,163 | ) | Examiner: Khan, Hassan A. |
| | ) | |
| Filed: July 23, 2017 | ) | Washington, D.C. |
| | ) | |
| For: System and method for Server-based control | ) | January 13, 2021 |
| | ) | |

**AMENDMENT:**

Honorable Commissioner for Patents
U.S. Patent and Trademark Office
Randolph Building, Mail Stop Amendments
401 Dulany Street
Alexandria, VA 22314

Sir:

In response to the examiner's action dated December 22, 2020 (hereinafter the "**Action**"), kindly amend the above-identified application as follows:

**Remarks / Comments** begin on page **2** of this paper.

**REMARKS / COMMENTS**

The examiner's action dated December 22, 2020 (Hereinafter – "Action"), has been received, and its contents carefully noted. The rejections presented in the Action are traversed for reasons to be presented below.

**a. Missing explanation why the references are analogous**

**As detailed in MPEP 707.07(f) the response to non-analogous art as part of form paragraph 7.37.05 need to [2] "*explain why the reference is analogous art*". Further, according to MPEP 707.07(f) "… *an examiner must provide clear explanations of all actions taken* …", and the examiner "… *take note of the applicant's argument and answer the substance of it.*".**

Against the MPEP and the rules, the Action clearly fails to explain WHY the different references, such as the Beliles, Buck and Abe references are analogous and as such can be combined for the obviousness rejection.

It is settled that: "*A reference qualifies as prior art for an obviousness determination under § 103 only when it is analogous to the claimed invention.*" In re Klein, 647 F.3d 1343, 1348 (Fed. Cir. 2011) (citing Innovention Toys, v. MGA Entm't, Inc., 637 F.3d 1314, 1321 (Fed. Cir. 2011), and In re Bigio, 381 F.3d 1320, 1325 (Fed. Cir. 2004)).

It is further settled that: "*Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is*

*involved*". [In re Klein, 647 F.3d at 1348 (quoting In re Bigio, 381 F.3d at 1325)].

**b. No rationale provided for combining with the references.**

In claims 2-3, 6-10, 13, 16, and 25, the Action is based on the Buck reference to supplement the missing limitations. Similarly, in claim 17-18, the Action is based on the Abe reference to supplement the missing limitations. However, the Action fails to provide a proper rationale for supporting WHY the Beliles reference should be modified to include the features recited in these claims. The rationale stated in claim 1 clearly is not applicable to the different features recited in these claims.

It is respectfully submitted that obviousness requires "*a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does*." KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007), that "*The Examiner bears the initial burden of presenting a prima facie case of obviousness*". In re Oetiker, 977 F.2d 1443, 1445 (Fed. Cir. 1992), and that "*[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness*." In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006), quoted with approval in KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007).

**c. Improper rejections - No reasoning provided for obviousness rejections.**

The rejections of claims 19-24 merely states that each of these claims "… *does not teach or further define over the limitation in claim 17 respectively. Therefore claim …. Is*

*rejected for the same rationale of rejection as set forth in claim 17.* ". Similarly, the rejections of claims 26-30 merely states that each of these claims "… *does not teach or further define over the limitation in claim 25 respectively. Therefore claim …. Is rejected for the same rationale of rejection as set forth in claim 17.* ".

The applicant respectfully submits that such a statement is improper and factually not correct. For example, claim 17 recites that "… *the client device or the controlled device is integrated in, is part of, or is entirely included in, an appliance.*", and claim 21, just as an example, further defines the appliance so that "… *the primary function of the appliance is associated with environmental control, and the appliance is part of an Heating, Ventilation and Air Conditioning (HVAC) system*". **Clearly these claims further define the recites appliance of claim 17. It is respectfully submitted that according to the MPEP and the rules every word in the claims should be considered.**

**Summary.**

The Federal Circuit has held that the Office carries its procedural burden when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for rejection, "*together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application*." See In re Jung, 637 F.3d 1356, 1362 (Fed. Cir. 2011) (brackets in original, quoting 35 U.S.C. § 132). Put simply, the Office is required to set forth the statutory basis of the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of§ 132. Id.; see also Chester v. Miller, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (noting that§ 132 "*is violated when*

*a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection*").

37 C.F.R. § 1.104(b) requires that the Office Action must be complete as to all matters and such is not the case where one or more claims have not been addressed. Because the Office Action failed to address the above issues in the manner required by the MPEP, **Applicant respectfully requests that the Examiner issue a new non-final Office Action addressing all above issued as required by the MPEP and the C.F.R. Additionally, because the rejections would be presented for the first time on the record, Applicant respectfully notes that the new Office Action rejecting one or more of these claims cannot be made final per 37 C.F.R. § 1.113.**

The absence of a reply to a specific rejection, issue, or comment, does not signify agreement with that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims that have not been expressed.

Nothing in this reply should be understood as conceding any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claims does not necessarily signify concession of unpatentability to the claim before its amendment. It should further be understood that any filing of a terminal disclaimer to obviate a rejection based on nonstatutory double patenting is not an admission of the propriety of the rejection.

If the above arguments should not now place the application in the condition for allowance, the examiner is invited to call undersigned counsel to resolve any remaining issues.

Respectfully submitted,

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Amazon EX1004 Page 228

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| EXAMINER | |
|---|---|
| KHAN, HASSAN ABDUR-RAHMAN | |

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| 2456 | |

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|---|---|
| 12/22/2020 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| *Office Action Summary* | **Application No.** 15/657,163 | **Applicant(s)** BINDER et al. | |
|---|---|---|---|
| | **Examiner** HASSAN A KHAN | **Art Unit** 2456 | **AIA (FITF) Status** No |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☑ Responsive to communication(s) filed on 06/22/2020.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims***

5) ☑ Claim(s) 1-30 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-30 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

**Application Papers**

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 10/5/20, 6/22/20, 11/15/19, 1/8/20, 3/13/20.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

**DETAILED ACTION**

**1.** Claims 1, 4, 6, 12, 25, 27 - 28 and 30.

**2.** Claims 1 - 30 have been examined and are pending.

***Continued Examination under 37 CFR 1.114***

**3.** Patent Board Decision Rendered – *Examiner Affirmed* on **05-04-2020**. Under 35 U.S.C. § 134(a), Appellant appeals from the Examiner's decision to reject claims 1 - 30. A *request for continued examination* under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/30/2020 has been entered.

***Priority***

**4.** It is noted that the appellant **FAILED** to provide evidence regarding a limitation in the *Independent Claim 1 "a microphone in the client device"* in prior-filed provisional application 61/584,500 (filed 01/09/2012). It is noted that disclosure of prior-filed provisional application 61/584,500 **does not provide support** for this claimed subject matter (MPEP Form Paragraph ¶2.09 and ¶2.10). It is noted that a similar warning have been issued in the related application (15832787, Examiner's Answer to Appeal Brief submitted to PTAB on 04/28/2020) regarding the use of the term 'multiple microphones', however **NO ACTION** has been taken by the Applicant. It is clearly noted that the specifications of the provisional application 61/584,500 (filed on 01/09/2012 by the applicant) **DOES NOT** mention any of these terms: 'microphone' or 'multiple microphone' or 'electroacoustic sensor'.

***Information Disclosure Statement***

**5.** The five (5) information disclosure statements (IDS) submitted on 11/15/2019, 01/08/2020, 03/13/2020, 06/22/2020 and 10/05/2020, in addition to the previous nine (9) information disclosure statements (IDS) submitted on 07/23/2017, 08/17/2017, 11/29/2017, 05/29/2018 and 11/19/2018 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements has not being considered by the examiner. It is impractical for the examiner to review the references thoroughly with the number of references cited in the case. By initialing each of the cited references on the accompanying 1449 forms, the examiner is merely acknowledging the submission of the cited references and merely indicating that only a cursory review is made of the cited references. Please identify the top 10-20 references that is the most relevant art, with pinpoint specific citations for review.

An applicant's duty of disclosure of material and information is not satisfied by presenting a patent examiner with "a mountain of largely irrelevant [material] from which he is presumed to have been able, with his expertise and with adequate time, to have found the critical [material]. It ignores the real world conditions under which examiners work." Rohm & Haas Co. v. Crystal Chemical Co., 722 F.2d 1556, 1573 [220 USPQ 289] (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (Emphasis in original). Patent applicant has a duty not just to (disclose pertinent prior art references but to make a disclosure in such way as not to "bury" it within other disclosures of less relevant prior art; See Golden Valley Microwave Foods Inc. v. Weaver Popcorn Co. Inc., 24 USPQ2d 1801 (N.D Ind. 1992); Molins PLC v. Textron Inc., 26 USPQ2d 1889, at 1899 (D.Del. 1992); Penn Yan Boats, Inc. v. Sea Lark Boats, Inc. et al., 175 USPQ 260, at 272 (S.D. Fl-1972).

***Claim Rejections - 35 USC § 103***

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims the examiner presumes that the subject matter of the various claims was commonly owned as of the effective filing date of the claimed invention(s) absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and effective filing dates of each claim that was not commonly owned as of the effective filing date of the later invention in order for the examiner to consider the applicability of 35 U.S.C. 102(b)(2)(C) for any potential 35 U.S.C. 102(a)(2) prior art against the later invention.

**6.** Claims 1 - 30 are rejected under 35 U.S.C. 103 as being unpatentable over US Patent Application Publication No. 2007/0283005 to Beliles et al. (hereinafter Beliles), in view of US Patent Application Publication No. 2009/0089065 to Buck et al. (hereinafter Buck) and in view of US Patent Application Publication No. 2012/0253480 to Abe.

**Regarding Claim 1**, Beliles discloses (in ¶0004) a method and system for dynamically responding to non-network events at a network device in a computer network that further includes:

**a method, for use with a client device in a building communicating over a wireless network and an internet-connected server device external to the building, the method comprising;** Beliles discloses (in ¶0015, ¶0016 and ¶0034) a building such as a server room with installed network-attached sensors, that transmits the data over a network such as the Internet (i.e. external network), to destination devices such as a monitoring system or a control room (i.e. control server) using network devices such as routers in case of the non-network events (e.g. fires, floods, unauthorized physical access etc.).

Beliles does not explicitly disclose capturing, by a microphone in the client device, a first human voice data, sending to the server, by the client device via the wireless network, processing, by the server, the captured first human voice data, operating multiple actuators in a controlled device in response to captured human voice data, receiving, by the server over the Internet, the captured human voice data, and capturing, by a microphone in the client device, a second human voice data, sending to the server, by the client device via the wireless network, the captured second human voice data, receiving, by the server over the Internet, the captured second human voice data, processing, by the server, the captured second human voice data, responsive to the processing, sending a second message, by the server to the controlled device over the Internet, receiving, by the controlled device via the wireless network, the second message, and operating a second actuator in the controlled device in response to the received second message. However, in an analogous art, Buck teaches:

**capturing, by a microphone in the client device, a first human voice data, sending to the server, by the client device via the wireless network;** Buck teaches capturing human voice data using the microphones (in ¶0031) and then transmitting to external devices using a wireless network (¶0050).

**processing, by the server, the captured first human voice data, operating multiple actuators in a controlled device in response to captured human voice data, receiving, by the server over the Internet, the captured human voice data;** Buck teaches (¶28) wireless vehicle buses 408 convey the control signals and/or actuator signals to one or more local or remote (e.g., out-of-vehicle) destinations (i.e. and external server connected over the internet). Buck teaches that spoken words are converted into recognizable commands and in response the actuator may perform an action (in ¶28-¶32). The devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors, sensor thresholds, visual/aural setting, etc.) that may be used to adjust mechanical and/or electronic elements and devices (e.g. adjusting mirrors, adjusting seat, in Fig. 5).

**capturing, by a microphone in the client device, a second human voice data, sending to the server, by the client device via the wireless network, the captured second human voice data, receiving, by the server over the Internet, the captured second human voice data, processing, by the server, the captured second human voice data, responsive to the processing, sending a second message, by the server to the controlled device over the Internet, receiving, by the controlled device via the wireless network, the second message, and operating a second actuator in the controlled device in response to the received second message;** Buck teaches capturing human voice data using the microphones (in ¶31) and then transmitting to external devices (such as a server) using a wireless network (¶50). Buck teaches (¶28) wireless vehicle buses 408 convey the control signals and/or actuator signals to one or more local or remote (e.g., out-of-vehicle) destinations (the Office and the PTAB decision on Appeal 2019-002056 on 05/04/20 notes: *we see no reason why these destinations cannot include an external internet-connected server*). Buck teaches that spoken words are converted into recognizable commands and in response the

actuator may perform an action (in ¶28-¶32). The devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors, sensor thresholds, visual/aural setting, etc.) that may be used to adjust mechanical and/or electronic elements and devices (e.g. adjusting mirrors, adjusting seat, in Fig. 5). Buck teaches (in Fig. 5 and ¶36) when one or more user(s) desires to initiate adjustments on one or more actuators (e.g. first actuator i.e. mirror or second actuator i.e. seat), the user(s) may articulate the code phrase, e.g., "Mirror and Seat setting", or part of the code phrase (e.g., without a command word like "store"). When received, the speech recognition and control process may differentiate different users (e.g., multiple users) by analyzing the speech input and detect authorizations. Buck teaches (¶38) individual voice characteristics of a speaker (user) may be stored locally or remotely in a central location to identify speakers. Different users (e.g., drivers, passengers, occupants) may initiate automatic adjustments of vehicle elements even when they articulate similar or identical code phrases.

It would have been obvious as of the effective filing date to one of ordinary skill in the art to combine a method, for use with a client device in a building communicating over a wireless network and an internet-connected server device external to the building, as disclosed by Beliles, and capturing, by a microphone in the client device, a first human voice data, sending to the server, by the client device via the wireless network, processing, by the server, the captured first human voice data, operating multiple actuators in a controlled device in response to captured human voice data, receiving, by the server over the Internet, the captured human voice data, and capturing, by a microphone in the client device, a second human voice data, sending to the server, by the client device via the wireless network, the captured second human voice data, receiving, by the server over the Internet, the captured second human voice data, processing, by the server, the captured second human voice data, responsive to the processing, sending a second message, by the server to the controlled device over the Internet, receiving, by the controlled device via the wireless network, the second message, and operating a second actuator in the controlled device in response to the received second message, as taught by Buck, for the purpose of

implementing improved processes to Beliles's system by adding human speech recognition and actuator voice control and adjustments of one or more devices using the speech patterns, accents and natural language processing (Buck, ¶0018).

Beliles in view of Buck does not explicitly disclose processing, by the server, responsive to the processing, sending a message, by the server to the client over the Internet, receiving, by the controlled device via the wireless network, the message, and operating the actuator in the controlled device in response to the received message. However, in an analogous art, Abe teaches:

**processing, by the server, the responsive to the processing, sending a message, by the server to the client over the Internet, receiving, by the controlled device via the wireless network, the first message, operating a first actuator in the controlled device in response to the first received message;** Abe teaches (in Fig. 15) a control apparatus is connected to a plurality of networks through the internet and includes a sensor information acquisition section, a sensor information accumulation section, a control command determination section, a control rule accumulation section, a communication section and a device control section. The control command determination section determines the control command on the basis of the sensor information and the control rules (i.e. control logic), and accordingly the device control section controls each of the devices by outputting the control command determined in the control command determination section to the devices to be controlled (¶0050 and ¶0051).

It would have been obvious as of the effective filing date to one of ordinary skill in the art to combine the method for use with a client device in a building communicating over a wireless network and an internet-connected server device external to the building and capturing, by a microphone in the client device, a first human voice data, sending to the server, by the client device via the wireless network, processing, by the server, the captured first human voice data, operating multiple actuators in a controlled device in response to captured human voice data, receiving, by the server over the Internet, the captured human voice data, and capturing, by a microphone in the client device, a second human voice data,

sending to the server, by the client device via the wireless network, the captured second human voice data, receiving, by the server over the Internet, the captured second human voice data, processing, by the server, the captured second human voice data, responsive to the processing, sending a second message, by the server to the controlled device over the Internet, receiving, by the controlled device via the wireless network, the second message, and operating a second actuator in the controlled device in response to the received second message, as disclosed by Beliles in view of Buck, and processing, by the server, responsive to the processing, sending a message, by the server to the client over the Internet, receiving, by the controlled device via the wireless network, the message, and operating the actuator in the controlled device in response to the received message, as taught by Abe, for the purpose of implementing an internet-connected control server that communicates with home network to monitor the conditions via sensors and sends the control command over the wireless internet to the controlled device when an abnormality occurs (Abe: Figs. 15, 16, ¶104 - ¶105).

**Regarding Claim 2**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the controlled device is part of, integrated with, or the same as, the client device;** Buck teaches (in ¶0020) that the controlled device (i.e. seating system, electronic entertainment, mirror controls or navigation device etc.) are part of the client device (i.e. vehicle or vehicle related system).

**Regarding Claim 3**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the processing comprises performing a voice recognition algorithm for identifying the voice of a specific person;** Buck teaches (in ¶0037 and ¶0038) that to recognize a spoken word, the process may compute a most likely sequence of states through the Hidden Markov Models (HMM). This

process may be performed through a Viterbi algorithm, which may iteratively determine the most likely path through the associated trellis. Individual voice characteristics of a speaker (user) may be stored locally or remotely in a central location (e.g., in a relational database that may be structured as the database described above) to identify speakers.

**Regarding Claim 4**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Beliles discloses:

**wherein the client device further comprises a sensor that outputs sensor data that responds to a physical phenomenon, wherein the method further comprising sending to the server, by the client device via the wireless network, the sensor data, and wherein the first message is sent by the server in response to the sensor data;** Beliles discloses (in Fig. 6 and ¶0052) one or more sensors automatically detects one or more non-network events (i.e. sensor data that responds to a physical phenomenon), and notifications of the non-network events are then transmitted over the network to one or more destination network devices. Beliles discloses (in ¶0054) that in response to the received notifications, the network device generates a response (i.e. a message) such as an instruction by the network device to one or more network-attached physical control devices to modify one or more physical parameters based on the applied policy.

**Regarding Claim 5**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 4. Further, Beliles discloses:

**wherein the sensor is a thermoelectric sensor that responds to a temperature or to a temperature gradient of an object using conduction, convection, or radiation, wherein the sensor is a photoelectric sensor that responds to a visible or an invisible light, the invisible light is infrared, ultraviolet, X-rays, or gamma rays, wherein the photoelectric sensor is based on the photoelectric or**

**photovoltaic effect, and comprises a semiconductor component that comprises a photodiode, a phototransistor, or a solar cell, or wherein the photoelectric sensor is based on Charge-Coupled Device (CCD) or a Complementary Metal-Oxide Semiconductor (CMOS) element;** Beliles discloses (in ¶0028) that one or more sensors, such as motion sensor 121, smoke sensor 122, fire sensor 123, or other network-attached sensors (e.g. thermoelectric sensor, moisture sensors, etc.) may be attached to the network through one or more network-attached sensor translators 131 and 132, or may be directly attached to the network (e.g., a sensor 124 with integrated translator) themselves.

**Regarding Claim 6**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein each of the first and second actuators is directly or indirectly affecting, changing, producing, or creating a physical phenomenon;** Buck teaches (in ¶0032) that the speech recognition and control process may interface a physical or a wireless bus system that interfaces in-vehicle and/or out-vehicle devices and networks. The devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors, sensor thresholds, visual/aural setting, etc.) that may be used to adjust mechanical (i.e. physical) and/or electronic elements and devices.

**Regarding Claim 7**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the physical phenomenon comprises temperature, humidity, pressure, audio, vibration, light, motion, sound, proximity, flow rate, electrical voltage, or electrical current;** Buck teaches (in ¶0028) the phrase may actuate one or more operations such as the position of one or more seats, one or more mirrors, or communicate or program one or more powertrain, chassis, climate, entertainment, or navigation devices (e.g., a radio, a media or multi-media system, a navigation system,

etc.). In other processes, the operation may tune a pass band of a bandwidth filter (e.g., select an audio channel), adjust a volume level, a treble setting, a bass setting, a balance control, and/or other aural settings.

**Regarding Claim 8**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the client device comprises multiple microphones, and wherein the capturing comprises capturing, by the multiple microphones in the client device, the human voice data;** Buck teaches (in ¶0031) some systems interface one or more microphones or a microphone array that includes two or more directional microphones (e.g., multiple directional microphones).

**Regarding Claim 9**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 8. Further, Buck discloses:

**wherein the multiple microphones are arranged as a directional microphones array operative to estimate a number, magnitude, frequency, Direction-Of-Arrival (DOA), distance, or speed of a phenomenon impinging the microphones array;** Buck teaches (in ¶0031) some systems interface one or more microphones or a microphone array that includes two or more directional microphones (e.g., multiple directional microphones).

**Regarding Claim 10**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the microphone is an omnidirectional, unidirectional, or bidirectional microphone that is based on the sensing an incident sound based motion of a diaphragm or a ribbon, or wherein the microphone comprises a condenser, an electret, a dynamic, a ribbon, a carbon, or a piezoelectric**

**microphone; the multiple microphones are arranged as a directional microphones array operative to estimate a number, magnitude, frequency, Direction-Of-Arrival (DOA), distance, or speed of a phenomenon impinging the microphones array;** Buck teaches (in ¶0031) that to convert sound into analog signals or digital signals, some systems interface one or more microphones or a microphone array that includes two or more directional microphones (e.g., multiple directional microphones).

**Regarding Claim 11**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Beliles discloses:

**wherein the client device or the controlled device are addressable in the wireless network or the Internet using distinct locally administered addresses or a universally administered digital addresses stored in a volatile or non-volatile memory of the respective device and uniquely identifying the respective device in the network;** Beliles teaches (in ¶0035 - ¶0039) that the network device send a notification using the TCP/IP data packets, and the message includes one or more headers 310 (e.g., IP/ATM headers, etc.), and a data field 320. Source address 312 and destination address 314 within the header 310 are the network addresses for the sending device (e.g., sensor translators) and the receiving device (e.g., a monitor/control system 140), respectively. Further, the memory 240 comprises a plurality of storage locations that are addressable by the processor 220 and the network interfaces 210 for storing software programs and data structures associated with the present invention (¶0032).

**Regarding Claim 12**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Beliles discloses:

**wherein the address is a MAC layer address that is MAC-48, EUI-48, or EUI-64 address type or wherein the address is a layer 3 address and is static or dynamic IP address that is IPv4 or IPv6 type address;** Beliles teaches (in ¶0035 - ¶0039) that the network device send a notification using the TCP/IP

data packets, and the message includes one or more headers (e.g., IP/ATM headers, etc.), and a data field. Source address and destination address within the header are the network addresses (i.e. MAC layer addresses and/or IP addresses) for the sending device (e.g., sensor translators) and the receiving device (e.g., a monitor/control system), respectively.

**Regarding Claim 13**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the wireless network is a Wireless Personal Area Network (WPAN), that is according to, or based on, Bluetooth™ or IEEE 802.15.1-2005standards, or wherein the WPAN is a wireless control network that is according to, or based on, Zigbee™, IEEE 802.15.4-2003, or Z-Wave™ standards;** Buck teaches (in ¶0052) that the speech recognition controller may be compliant with a Wi-Fi protocols or multiple protocols or subsets (e.g., ZigBee, High Speed Packet Access (e.g., High Speed Downlink Packet Access and/or High Speed Uplink Packet Access), Bluetooth, Mobile-Fi, Ultrawideband, Wi-Fi, WiMax, mobile WiMax, cellular, satellite, etc.

**Regarding Claim 14**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Beliles discloses:

**wherein the wireless network is a Wireless Personal Area Network (WPAN), that is according to, or based on, Bluetooth™ or IEEE 802.15.1-2005standards, or wherein the WPAN is a wireless control network that is according to, or based on, Zigbee™, IEEE 802.15.4-2003, or Z-Wave™ standards;** Beliles teaches (in Fig. 1 and ¶0027) a schematic block diagram of an exemplary computer network 100 comprising a plurality of devices interconnected to a network cloud 110, such as, e.g., a wide area network (WAN), local area network (LAN), etc.

**Regarding Claim 15**, does not teach or further define over the limitation in claim 13 respectively. Therefore claim 15 is rejected for the same rationale of rejection as set forth in claim 13.

**Regarding Claim 16**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the wireless network is a cellular telephone network, that is a Third Generation (3G) network that uses UMTS W-CDMA, UMTS HSPA, UMTS TDD, CDMA2000 lxRTT, CDMA2000 EV-DO, or GSM EDGE-Evolution, and wherein the cellular telephone network is a Fourth Generation (4G) network that uses HSPA+, Mobile WiMAX, LTE, LTE-Advanced, MBWA, or is based on IEEE 802.20-2008;** Buck teaches (in ¶0052) a cellular or wireless protocol, a wireless or cellular telephone, a radio, a satellite, or other wireless communication system may link the speech recognition controller 404 transceivers 414 to a privately accessible or publicly accessible distributed network. The system may be complaint with WiMax or IEEE 802.16a or may have a frequency band within a range of about 2 to about 11 GHz, a range of about 31 miles, and a data transfer rate of about 70 Mbps. In other applications, the speech recognition controller may be compliant with a Wi-Fi protocols or multiple protocols or subsets (e.g., ZigBee, High Speed Packet Access (e.g., High Speed Downlink Packet Access and/or High Speed Uplink Packet Access), Bluetooth, Mobile-Fi, Ultrawideband, Wi-Fi, WiMax, mobile WiMax, cellular, satellite, etc., referred to as the transceiver protocols) that may be automatically detected and selected and may enable this automatic access through one or more communication nodes.

**Regarding Claim 17**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Abe discloses:

**wherein the client device or the controlled device is integrated in, is part of, or is entirely included in, an appliance;** Abe teaches (in ¶0034) a control apparatus that acquires sensor information

and determines a control command to control a plurality of home appliances (e.g. refrigerator, stove, oven, microwave, dishwasher, washing machine, television etc.) such as an air conditioner.

**Regarding Claim 18**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Abe discloses:

**wherein the client device or the controlled device is integrated in, is part of, or is entirely included in, an appliance;** Abe teaches (in ¶0036) a control apparatus that acquires sensor information and determines a control command to control a plurality of home appliances, such as an air conditioner.

**Regarding Claim 19**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 19 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 20**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 20 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 21**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 21 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 22**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 22 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 23**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 23 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 24**, does not teach or further define over the limitation in claim 17 respectively. Therefore claim 24 is rejected for the same rationale of rejection as set forth in claim 17.

**Regarding Claim 25**, the combination of Beliles, Buck and Abe discloses all the elements with respect to claim 1. Further, Buck discloses:

**wherein the first actuator is an electric light source for converting electrical energy into light that emits visible or non-visible light for illumination or indication, and the non-visible light is infrared, ultraviolet, X-rays, or gamma rays;** Buck teaches (¶0032) that the devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors, sensor thresholds, visual/aural setting, etc.) that may be used to adjust mechanical and/or electronic elements and devices (e.g. controlling the headlights, cabin lights or the fog-lights, controlling the audio speakers and volume, controlling the digital media player, controlling the windows up/down function).

**Regarding Claim 26**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 26 is rejected for the same rationale of rejection as set forth in claim 25.

**Regarding Claim 27**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 27 is rejected for the same rationale of rejection as set forth in claim 25.

**Regarding Claim 28**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 28 is rejected for the same rationale of rejection as set forth in claim 25.

**Regarding Claim 29**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 29 is rejected for the same rationale of rejection as set forth in claim 25.

**Regarding Claim 30**, does not teach or further define over the limitation in claim 25 respectively. Therefore claim 30 is rejected for the same rationale of rejection as set forth in claim 25.

***Response to Arguments***

***Claim Rejections - 35 USC § 103***

**7.** Applicant's amendments and arguments in the Appeal Brief filed on 06/22/2020 with respect to Claims 1 – 30 have been fully considered and the 35 USC § 103 rejection is maintained.

***Conclusion***

**8.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to HASSAN KHAN whose telephone number is (313) 446-6574 and fax number is (571) 483-7559. The examiner can normally be reached on MONDAY - THURSDAY. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Philip Chea can be reached on (571) 272-3951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at

866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HASSAN A KHAN/
Examiner, Art Unit 2456

/RICHARD G KEEHN/
Primary Examiner, Art Unit 2456

| Notice of References Cited | Application/Control No. 15/657,163 | Applicant(s)/Patent Under Reexamination BINDER et al. | |
|---|---|---|---|
| | Examiner HASSAN A KHAN | Art Unit 2456 | Page 1 of 1 |

**U.S. PATENT DOCUMENTS**

| * | | Document Number Country Code-Number-Kind Code | Date MM-YYYY | Name | CPC Classification | US Classification |
|---|---|---|---|---|---|---|
| * | A | US-20160062330-A1 | 03-2016 | Abe; Yuuichi | G05B15/02 | 700/12 |
| * | B | US-20070283005-A1 | 12-2007 | Beliles; Robert P. | H04L41/0816 | 709/224 |
| * | C | US-20090089065-A1 | 04-2009 | Buck; Markus | G10L15/26 | 704/275 |
| * | D | US-20150138333-A1 | 05-2015 | DeVaul; Richard Wayne | H04R1/028 | 348/78 |
| * | E | US-20100305807-A1 | 12-2010 | Basir; Otman A. | B60R16/0373 | 701/31.4 |
| * | F | US-20070038461-A1 | 02-2007 | Abbott; Lisa | G10L15/30 | 704/275 |
| * | G | US-20080215336-A1 | 09-2008 | Oesterling; Christopher L. | G10L15/26 | 704/275 |
| | H | | | | | |
| | I | | | | | |
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|---|---|---|---|---|---|---|
| | N | | | | | |
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| Search Notes | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | Examiner | Art Unit |
| | HASSAN A KHAN | 2456 |

| CPC - Searched* | | |
|---|---|---|
| Symbol | Date | Examiner |
| H04L67/12, B60K 31/00, B60K 31/18, B60Y2200/11, B60Y2200/12, B60Y2200/126, B60Y2200/13, B60Y2200/30, B60Y2200/40, B60Y2200/50, B60Y2200/90, G01C 21/00, G06Q2240/00, G07C 5/008, G08G 1/00 | 9/29/2017 | H.K. |

| CPC Combination Sets - Searched* | | |
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|---|---|---|---|
| Class | Subclass | Date | Examiner |
| | | | |

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| | 15/657,163 | BINDER et al. |
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| Assignee search conducted (see EAST search history) | 9/29/2017 | H.K. |
| Google Patents search conducted | 9/29/2017 | H.K. |
| Inventor search conducted (see EAST search history) | 9/29/2017 | H.K. |
| EAST Search History (see attached) | 9/29/2017 | H.K. |
| Assignee search conducted (see EAST search history) | 01/19/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 01/19/2018 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 01/19/2018 | H.K. |
| Assignee search conducted (see EAST search history) | 6/18/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 6/18/2018 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 6/18/2018 | H.K. |
| Assignee search conducted (see EAST search history) | 08/30/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 08/30/2018 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 08/30/2018 | H.K. |
| Inventor search conducted (see EAST search history) | 12/18/2020 | H.K. |
| Assignee search conducted (see EAST search history) | 12/18/2020 | H.K. |
| Google Patents search conducted (cursory review) | 12/18/2020 | H.K. |
| NPL IP.com search conducted (cursory review) | 12/18/2020 | H.K. |
| Updated EAST Search History further limited by text search (see attached) | 12/18/2020 | H.K. |

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|---|---|---|---|
| **US Class/CPC Symbol** | **US Subclass/CPC Group** | **Date** | **Examiner** |
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| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
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| = | Allowed | ÷ | Restricted | I | Interference | O | Objected |

**CLAIMS**

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 09/29/2017 | 01/19/2018 | 06/18/2018 | 08/30/2018 | 12/28/2018 | 12/18/2020 | | | |
| | 1 | ✓ | ✓ | ✓ | ✓ | A | ✓ | | | |
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| | 3 | ✓ | ✓ | ✓ | ✓ | A | ✓ | | | |
| | 4 | ✓ | ✓ | ✓ | ✓ | A | ✓ | | | |
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| | 24 | ✓ | ✓ | ✓ | ✓ | A | ✓ | | | |
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| | 26 | ✓ | ✓ | ✓ | ✓ | A | ✓ | | | |
| | 27 | ✓ | ✓ | ✓ | ✓ | A | ✓ | | | |
| | 28 | ✓ | ✓ | ✓ | ✓ | A | ✓ | | | |
| | 29 | ✓ | ✓ | ✓ | ✓ | A | ✓ | | | |
| | 30 | ✓ | ✓ | ✓ | ✓ | A | ✓ | | | |

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
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|---|---|
| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

**U.S.PATENTS** Remove

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|---|---|---|---|---|---|---|
| | 1 | 20130121239 | A1 | 2013-05-16 | John Alson Hicks | |
| | 2 | 20130048319 | A1 | 2013-02-28 | William E. Glaub | |
| | 3 | 20120236748 | A1 | 2012-09-20 | Edwin B. Brownrigg | |
| | 4 | 20120229283 | A1 | 2012-09-13 | Cameron MCKENNA | |
| | 5 | 20110082599 | A1 | 2011-04-07 | Makarand Shinde | |



ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
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| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 6 | 20090051551 | A1 | 2009-02-26 | Hai D. Pham | |
| | 7 | 20090042533 | A1 | 2009-02-12 | Karen D. Lontka | |
| | 8 | 20080221715 | A1 | 2008-09-11 | Paul Krzyzanowski | |
| | 9 | 20070262847 | A1 | 2007-11-15 | Cory L. Grabinger | |
| | 10 | 20070169080 | A1 | 2007-07-19 | Larry Alan Friedman | |
| | 11 | 20060265195 | A1 | 2006-11-23 | Jon A. Woodard | |
| | 12 | 20050226201 | A1 | 2005-10-13 | Brian K. McMillin | |
| | 13 | 20050154494 | A1 | 2005-07-14 | Osman Ahmed | |
| | 14 | 20040217857 | A1 | 2004-11-04 | Gary Lennartz | |
| | 15 | 20010024163 | A1 | 2001-09-27 | Thomas D. Petite | |

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| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

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| Name/Print | Yehuda Binder | Registration Number | 73612 |

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| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
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| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
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| | 1 | 7019646 | B1 | 2006-03-28 | Noel Woodard | |

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| | 1 | 20120112970 | A1 | 2012-05-10 | Ruben Caballero | |
| | 2 | 20120303150 | A1 | 2012-11-29 | Meenakshi Sundaram Krishnaswamy | |

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| | 1 | | | | | | | |

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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| Examiner Initials* | Cite No | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published. | T[5] |
|---|---|---|---|
| | 1 | TP-LINK User Guide TL-POE10R, PoE Splitter, Rev. 3.0.0 Document Number – 7106503409, (Published 2010) (10 pages) | |

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**EXAMINER SIGNATURE**

| Examiner Signature | /HASSAN A KHAN/ | Date Considered | 12/16/2020 |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.



ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

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| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2020-09-29 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**



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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**
**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

**U.S.PATENTS** Remove

| Examiner Initial* | Cite No | Patent Number | Kind Code[1] | Issue Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | | | | | |

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| Examiner Initial* | Cite No | Publication Number | Kind Code[1] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | 20120034904 | A1 | 2012-02-09 | Michael J. LeBeau | |
| | 2 | 20090055019 | A1 | 2009-02-26 | Walter Dan Stiehl | |
| | 3 | 20050216121 | A1 | 2005-09-29 | Tsutomu Sawada | |
| | 4 | 20020198626 | A1 | 2002-12-26 | Michita Imai | |

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| Examiner Initial* | Cite No | Foreign Document Number[3] | Country Code[2] i | Kind Code[4] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear | T[5] |
|---|---|---|---|---|---|---|---|---|

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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

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|---|---|---|---|---|---|---|---|---|
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|---|---|---|---|
| | 1 | | |

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**EXAMINER SIGNATURE**

| Examiner Signature | /HASSAN A KHAN/ | Date Considered | 12/16/2020 |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.



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|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

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**EAST Search History**

**EAST Search History (Prior Art)**

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 2 | "20150138333" | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L2 | 5,774 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L3 | 27,508 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L4 | 46,791 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L5 | 46,791 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L6 | 379 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L7 | 1,246 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L8 | 309 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L9 | 520 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L10 | 122 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L11 | 195 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L12 | 105 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L13 | 165 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L14 | 60,121 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L15 | 637 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L16 | 23,829 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L17 | 88,949 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L18 | 34,665 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L19 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |

| | | | | | | |
|---|---|---|---|---|---|---|
| L20 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L21 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L22 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L23 | 27,508 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L24 | 21,277 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L25 | 55 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L26 | 473 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L27 | 118 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L28 | 67 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L29 | 252,008 | L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 | US-PGPUB; USPAT | OR | ON | 2020/12/18 11:17 |
| L30 | 1 | L29 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2020/12/18 11:17 |
| L31 | 812 | ((speech or sound) with voice with actuator) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:24 |
| L32 | 54,241 | ((speech or sound or voice) with actuator) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:25 |
| L33 | 3,641 | 32 and (sensor with (appliance or vehicle)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:25 |
| L34 | 391 | 33 and ((car or automobile or vehicle or truck or transport$6) with (mic or microphone)) | US-PGPUB; USPAT; USOCR; | OR | ON | 2020/12/18 11:26 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | FPRS; EPO; JPO; DERWENT; IBM_TDB | | | |
| L35 | 224 | 34 and ((speech or voice or audio) with process$4) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:27 |
| L36 | 90 | 35 and ((voice or speech) with (person or human)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:27 |
| L37 | 151 | 35 and ((voice or speech) with (person or human or user)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:27 |
| L38 | 151 | 37 and ((control$4 or operating or operat$2) with (device or actuator)) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:29 |
| L39 | 125 | 38 and (wireless with network) | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2020/12/18 11:31 |
| S1 | 1 | "13733634" | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:33 |
| S2 | 7,358 | (actuator with sensor with network) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:34 |
| S3 | 161 | (actuator with sensor with network with router) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:34 |
| S4 | 14 | (actuator with sensor with network with router with (car or vehicle)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:34 |

| | | | | | | |
|---|---|---|---|---|---|---|
| S5 | 1,020 | (actuator with sensor with network with (car or vehicle)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:37 |
| S6 | 535 | S5 and (router or routing) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:38 |
| S7 | 147 | S5 and (NAT or DHCP) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:38 |
| S8 | 54 | S5 and (control adj2 logic) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:39 |
| S9 | 7,358 | (actuator with sensor with network) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:48 |
| S10 | 675 | S9 and (piezoelectric$6 or (piezo$1electric$6)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:49 |
| S11 | 120 | S10 and (network with (routing or router)) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:49 |
| S12 | 58 | S11 and (vehicle or car) | US-PGPUB; USPAT | ADJ | ON | 2016/12/03 01:49 |
| S13 | 21 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:08 |
| S14 | 21 | S13 and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:08 |
| S15 | 1 | S13 and (actuator same router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:08 |
| S16 | 200 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:11 |
| S17 | 119 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) same network | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:12 |
| S18 | 110 | (actuator same router same ((vehicle or car or automobile or | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:12 |

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|---|---|---|---|---|---|---|
| | | transport) or (building))) same network same sensor | | | | |
| S19 | 76 | (actuator same router same ((vehicle or car or automobile or transport) or (building))) same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:12 |
| S20 | 68 | (actuator same router same ((vehicle or car or automobile) or (building))) same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:13 |
| S21 | 21 | (actuator same router same ((vehicle or car or automobile) same (building))) same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:15 |
| S22 | 21 | actuator same router same (vehicle or car or automobile) same building same network same (sensor or control) same data | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:15 |
| S23 | 47 | S20 XOR S22 | US-PGPUB; USPAT | ADJ | ON | 2017/02/13 22:17 |
| S24 | 1 | (US-8195844-$).did. | USPAT | ADJ | ON | 2017/02/13 22:36 |
| S25 | 1 | "20090083589" | USPAT | ADJ | ON | 2017/02/13 22:36 |
| S36 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/14 00:34 |
| S37 | 520 | (home with network) same sensor same gateway same network | US-PGPUB | ADJ | ON | 2017/02/14 00:37 |
| S38 | 222 | (home with network) with sensor with gateway | US-PGPUB | ADJ | ON | 2017/02/14 00:37 |
| S39 | 4 | (home with network) with sensor with gateway with command | US-PGPUB | ADJ | ON | 2017/02/14 00:38 |
| S40 | 22 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$).did. or (US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:23 |

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| | | 8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S41 | 21 | S40 and (vehicle or vehical or automobile or car) | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:29 |
| S42 | 21 | S40 and (vehicle or vehical or automobile or car) and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:29 |
| S43 | 15 | S40 and (vehicle or vehical or automobile or car) and actuator and sensor and network and cellular and wireless | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:30 |
| S44 | 15 | S40 and (coupled) | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:35 |
| S45 | 1 | S40 and (router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:36 |
| S46 | 832 | (vehicle or car) with router with (control or server) with network | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:37 |
| S47 | 11 | (vehicle or car) with router with (control or server) with network with actuator | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:37 |
| S48 | 2 | "20090198380" | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:42 |
| S49 | 1 | "20060217840" | US-PGPUB; USPAT | ADJ | ON | 2017/02/14 03:42 |
| S50 | 7 | (US-20160062330-$ or US-20090198380-$ or US-20060217840-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$).did. | US-PGPUB | ADJ | ON | 2017/02/17 04:34 |
| S51 | 4 | S50 and (actuator with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:34 |
| S52 | 4 | S50 and (actuator) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:36 |
| S53 | 3 | "13404575" | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:38 |
| S54 | 2 | S50 and (sensor with router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:39 |
| S55 | 27 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:39 |

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|---|---|---|---|---|---|---|
| | | 20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S56 | 3 | S55 and (sensor with router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:39 |
| S57 | 319 | (actuator with sensor with router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:40 |
| S58 | 178 | (actuator NEAR9 sensor NEAr9 router) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:40 |
| S59 | 125 | (actuator with sensor with router with (command or signal or transmi$6 or data)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 04:41 |
| S60 | 7 | (US-20160062330-$ or US-20090198380-$ or US-20060217840-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$).did. | US-PGPUB | ADJ | ON | 2017/02/17 21:05 |
| S61 | 2 | S60 and (router with (building or vehicle or car)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:06 |
| S62 | 2 | S60 and (router with (building or vehicle or car) with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:06 |
| S63 | 524 | (router with (building or vehicle or car) with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:06 |
| S64 | 96 | (router near9 (building or vehicle or car) near5 sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:07 |
| S65 | 28 | (router near9 (building or vehicle or car) near9 sensor near9 network) | US-PGPUB; USPAT | ADJ | ON | 2017/02/17 21:07 |
| S66 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/17 21:11 |
| S67 | 28 | (US-20130201316-$ or US-20100030421-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |

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| | | 20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S68 | 27 | S67 and (control with (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |
| S69 | 22 | S67 and (control NEAR0 (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |
| S70 | 26 | S67 and (control NEAR9 (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:11 |
| S71 | 9 | S67 and (command NEAR9 (actuator or sensor)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 05:15 |
| S72 | 2 | (US-20160062330-$ or US-20070283005-$).did. | US-PGPUB | ADJ | ON | 2017/02/20 06:05 |
| S73 | 1 | S72 and ((additional or extra or second or third) with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 06:29 |
| S74 | 28 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/20 06:30 |

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| | | 20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S75 | 12 | S74 and ((additional or extra or second or third) with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 06:31 |
| S76 | 2 | S72 and ((more) with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 06:32 |
| S77 | 5 | S74 and piezoelectric | US-PGPUB | ADJ | ON | 2017/02/20 06:43 |
| S78 | 2 | S72 and (IP or address or internet or protocol) | US-PGPUB | ADJ | ON | 2017/02/20 06:56 |
| S79 | 2 | S74 and (DHCP and (IPv4 or IPv6)) | US-PGPUB | ADJ | ON | 2017/02/20 07:02 |
| S80 | 146 | (control$6 with (sensor or actuator) with network) and (DHCP and (IPv4 or IPv6)) | US-PGPUB | ADJ | ON | 2017/02/20 07:04 |
| S81 | 69 | (control$6 with (sensor or actuator) with network) and (DHCP with (IPv4 or IPv6)) | US-PGPUB | ADJ | ON | 2017/02/20 07:04 |
| S82 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/20 07:12 |
| S83 | 36 | S81 and zigbee | US-PGPUB | ADJ | ON | 2017/02/20 07:21 |
| S84 | 9 | S81 and zigbee and (temperature with sensor) | US-PGPUB | ADJ | ON | 2017/02/20 07:22 |
| S85 | 36 | S81 and zigbee and (sensor) | US-PGPUB | ADJ | ON | 2017/02/20 07:22 |
| S86 | 15 | S81 and zigbee and (temperature) | US-PGPUB | ADJ | ON | 2017/02/20 07:22 |
| S87 | 12 | S81 and zigbee and (temperature) and (DHCP with assign$6) | US-PGPUB | ADJ | ON | 2017/02/20 07:23 |
| S88 | 3 | (US-20120253480-$ or US-20100071053-$ or US-20070283005-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 02:26 |
| S89 | 1 | S88 and (IP with assign$6) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:28 |
| S90 | 3 | S88 and (power) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:34 |
| S91 | 32 | (US-20130201316-$ or US-20100030421-$ or US- | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:35 |

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| | | 20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S92 | 15,493 | (router with power) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:36 |
| S93 | 2 | S91 and (router with power) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:36 |
| S94 | 1,606 | (router with power with (case or box or inside or enclosure or casing)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:36 |
| S95 | 578 | (router NEAR9 power NEAR9 (case or box or inside or enclosure or casing)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:37 |
| S96 | 587 | (router NEAR9 power NEAR9 (housed or enclos$5 or case or box or inside or enclosure or casing)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:37 |
| S97 | 17 | (router NEAR9 power NEAR9 (housed or enclos$5 or case or box or inside or enclosure or casing) NEAR9 (AC or DC)) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 02:37 |
| S98 | 17 | S91 and (light with sensor) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 03:05 |
| S99 | 0 | S88 and (light with (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:19 |

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| S100 | 5 | S91 and (light with (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:19 |
| S101 | 5 | S91 and (light NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:20 |
| S102 | 128 | ((actuator with light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:22 |
| S103 | 79 | ((actuator NEAR5 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:23 |
| S104 | 6 | (sensor with (actuator NEAR5 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:23 |
| S105 | 1 | (sensor with (actuator NEAR2 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:25 |
| S106 | 21 | ((actuator NEAR2 light) NEAR9 (invisible or visible or infrared, ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | US-PGPUB | ADJ | ON | 2017/02/21 03:25 |
| S107 | 1 | S106 and invisible | US-PGPUB | ADJ | ON | 2017/02/21 03:37 |
| S108 | 1 | S106 and (nonvisible or "non-visible" or invisible) | US-PGPUB | ADJ | ON | 2017/02/21 03:38 |
| S109 | 12 | S106 and (LED or SSL or (discharge adj2 lamp) or (flourescent adj2 lamp) or PLED or (laser near5 diode)) | US-PGPUB | ADJ | ON | 2017/02/21 03:50 |
| S110 | 10 | S106 and (diode or SSL or (discharge adj2 lamp) or (flourescent adj2 lamp) or PLED or (laser near5 diode)) | US-PGPUB | ADJ | ON | 2017/02/21 03:50 |
| S111 | 10 | S106 and (diode or (discharge adj2 lamp) or (flourescent adj2 lamp) or PLED or (laser near5 diode)) | US-PGPUB | ADJ | ON | 2017/02/21 03:50 |
| S112 | 4 | ((actuator NEAR2 light NEAR5 (discharge or emit)) NEAR9 (invisible or visible or infrared, | US-PGPUB | ADJ | ON | 2017/02/21 05:29 |

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| | | ultraviolet, xrays or "x-rays" or (x adj2 rays) or gamma)) | | | | |
| S113 | 58 | (actuator NEAR2 light NEAR5 (discharge or emit)) | US-PGPUB | ADJ | ON | 2017/02/21 05:30 |
| S114 | 4 | (actuator NEAR2 light NEAR5 (discharge or emit) NEAR9 visible) | US-PGPUB | ADJ | ON | 2017/02/21 05:30 |
| S115 | 5 | (actuator NEAR2 light NEAR5 (discharge or emit) with sensor) | US-PGPUB | ADJ | ON | 2017/02/21 05:31 |
| S116 | 1,605 | ((Frequency adj3 Division adj3 Multiplexing) or FDM) with power with (communication or signal or transmission) | US-PGPUB | ADJ | ON | 2017/02/21 05:48 |
| S117 | 1 | ((Frequency adj3 Division adj3 Multiplexing) or FDM) with power with (communication or signal or transmission) with band with splitter | US-PGPUB | ADJ | ON | 2017/02/21 05:48 |
| S118 | 34 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:54 |
| S119 | 13 | S118 and splitter | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:54 |

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| S120 | 13 | S118 and splitter and frequency | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:54 |
| S121 | 1 | S118 and (splitter same frequency) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:55 |
| S122 | 234 | (power with data with splitter with frequency) | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 05:56 |
| S123 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 10:03 |
| S124 | 462 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) | US-PGPUB | ADJ | ON | 2017/02/21 10:07 |
| S125 | 261 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:08 |
| S126 | 302 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) | US-PGPUB | ADJ | ON | 2017/02/21 10:08 |
| S127 | 273 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:09 |
| S128 | 112 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and transformer and capacitor | US-PGPUB | ADJ | ON | 2017/02/21 10:10 |
| S129 | 88 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and | US-PGPUB | ADJ | ON | 2017/02/21 10:10 |

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| | | transformer and capacitor and sensor | | | | |
| S130 | 41 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and transformer and capacitor and sensor and (split or splits or splitter) | US-PGPUB | ADJ | ON | 2017/02/21 10:13 |
| S131 | 31 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and (transformer with capacitor with (windings or wirings or coils)) | US-PGPUB | ADJ | ON | 2017/02/21 10:15 |
| S132 | 3 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) and (transformer with capacitor with (windings or wirings or coils)) and sensor and (split or splits or splitter) | US-PGPUB | ADJ | ON | 2017/02/21 10:19 |
| S133 | 239 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near3 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:34 |
| S134 | 262 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (modula$4 near5 band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:35 |

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| S135 | 45 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 modula$4 near5 (band or frequency or channel)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:35 |
| S136 | 1 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 modula$4 near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate or unique or other or another)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 10:51 |
| S137 | 57 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate)) and ((data or communication) near5 (channel or band or frequency)) | US-PGPUB | ADJ | ON | 2017/02/21 11:00 |
| S138 | 0 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate)) and ((data or communication) near5 (channel or band or frequency)) and (split or splitter or divide) and (transformer with capacitor with (windings or coils)) | US-PGPUB | ADJ | ON | 2017/02/21 11:01 |
| S139 | 17 | (high adj2 pass adj2 filter) and (low adj2 pass adj2 filter) and (FDMA or (frequency near5 division near5 multiple near5 access)) and (power near5 (band or frequenc$4 or channel) near5 (different or distinct or seperate)) and ((data or communication) near5 (channel or band or frequency)) and (split or splitter or divide) and (transformer with capacitor) | US-PGPUB | ADJ | ON | 2017/02/21 11:01 |

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| S140 | 1 | (US-20130308581-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 11:09 |
| S141 | 1 | (US-20110118888-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 11:28 |
| S142 | 2 | (US-20160062330-$ or US-20070283005-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 11:49 |
| S143 | 0 | S142 and appliance | US-PGPUB; USPAT | ADJ | ON | 2017/02/21 11:49 |
| S144 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2017/02/21 12:06 |
| S145 | 205 | (yehuda and binder).in. | US-PGPUB | ADJ | ON | 2017/02/21 12:24 |
| S146 | 26 | (benjamin and maytal).in. | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S147 | 26 | (may and patents).as. | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S148 | 25 | (may and patents).aanm. | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S149 | 8 | S147 and S148 | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S150 | 1 | S145 and S146 | US-PGPUB | ADJ | ON | 2017/02/21 12:25 |
| S151 | 43 | S147 or S148 | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S152 | 230 | S145 or S146 | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S153 | 230 | S151 or S152 | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S154 | 17 | S153 and piezoelectric.clm. | US-PGPUB | ADJ | ON | 2017/02/21 12:26 |
| S155 | 1 | S153 and (vehicle and router and actuator).clm. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S156 | 7,130 | H04L67/12.cpc. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S157 | 993 | 348/77.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S158 | 374 | 700/28.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:27 |
| S159 | 148 | 700/22.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:28 |
| S160 | 1,455 | 709/218.ccls. | US-PGPUB | ADJ | ON | 2017/02/21 12:28 |
| S161 | 2 | "20130080642" | US-PGPUB; USPAT | ADJ | ON | 2017/06/30 12:25 |

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| S162 | 1 | "14499166" | US-PGPUB; USPAT | ADJ | ON | 2017/06/30 12:27 |
| S163 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$).did. | US-PGPUB | ADJ | ON | 2017/07/05 10:43 |
| S164 | 2 | S163 and (sensor and actuator and router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:43 |
| S165 | 36 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:44 |
| S166 | 3 | S165 and (sensor and actuator and router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:44 |

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|---|---|---|---|---|---|---|
| S168 | 7 | S165 and (sensor same network same router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 10:45 |
| S169 | 36 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:20 |
| S170 | 7 | S169 and (sensor same network same router) | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:20 |
| S171 | 3 | S170 and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:20 |
| S172 | 24 | S169 and actuator | US-PGPUB; USPAT | ADJ | ON | 2017/07/05 11:21 |
| S173 | 2 | (US-20160062330-$ or US-20070283005-$).did. | US-PGPUB | OR | OFF | 2017/07/19 19:14 |
| S174 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 00:24 |
| S175 | 1 | "20120079149" | US-PGPUB | OR | OFF | 2017/07/20 00:29 |
| S176 | 1 | "20120079149" | US-PGPUB | OR | OFF | 2017/07/20 06:37 |

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| S177 | 1 | S176 and ((sensor or actuator) with router) | US-PGPUB | OR | OFF | 2017/07/20 06:37 |
| S178 | 1 | S176 and (router) | US-PGPUB | OR | OFF | 2017/07/20 06:37 |
| S179 | 0 | S176 and (commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:41 |
| S180 | 37 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | OR | OFF | 2017/07/20 06:41 |
| S181 | 1 | S180 and (commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:41 |
| S182 | 2 | (actuator with commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:42 |
| S183 | 25 | (sensor with commands with router) | US-PGPUB | OR | OFF | 2017/07/20 06:42 |
| S184 | 9 | (sensor NEAR9 commands NEAR9 router) | US-PGPUB | OR | OFF | 2017/07/20 06:42 |
| S185 | 3 | S184 and actuator | US-PGPUB | OR | OFF | 2017/07/20 06:54 |

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| S186 | 3 | (US-20160062330-$ or US-20100071053-$ or US-20070283005-$).did. | US-PGPUB | OR | OFF | 2017/07/20 09:43 |
| S192 | 3 | (US-20160062330-$ or US-20100071053-$ or US-20070283005-$).did. | US-PGPUB | OR | OFF | 2017/07/20 09:45 |
| S193 | 3 | S192 and address | US-PGPUB | OR | OFF | 2017/07/20 09:45 |
| S194 | 0 | S192 and ((unique or individual or distinct or separate) with address) | US-PGPUB | OR | OFF | 2017/07/20 09:46 |
| S195 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 12:16 |
| S200 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 12:17 |
| S201 | 12 | S200 and power | US-PGPUB | OR | OFF | 2017/07/20 12:17 |
| S202 | 2 | S200 and (power with (socket or port or connector)) | US-PGPUB | OR | OFF | 2017/07/20 12:17 |
| S203 | 3 | S200 and (power with (AC or DC)) | US-PGPUB | OR | OFF | 2017/07/20 12:18 |
| S204 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S205 | 0 | S204 and medical | USPAT | OR | OFF | 2017/07/20 12:23 |

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|---|---|---|---|---|---|---|
| S206 | 0 | S204 and medicine | USPAT | OR | OFF | 2017/07/20 12:23 |
| S207 | 0 | S204 and power | USPAT | OR | OFF | 2017/07/20 12:23 |
| S208 | 0 | S204 and actuator | USPAT | OR | OFF | 2017/07/20 12:23 |
| S209 | 14 | S200 and sensor | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S210 | 12 | S200 and power | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S212 | 1 | S204 and medical | US-PGPUB | OR | OFF | 2017/07/20 12:23 |
| S213 | 5 | S201 and (AC or DC) | US-PGPUB | OR | OFF | 2017/07/20 12:27 |
| S214 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 14:03 |
| S215 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 15:03 |
| S220 | 14 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20120079149-$).did. | US-PGPUB | OR | OFF | 2017/07/20 15:05 |
| S225 | 5 | S220 and battery | US-PGPUB | OR | OFF | 2017/07/20 15:06 |
| S226 | 12 | S220 and network | US-PGPUB | OR | OFF | 2017/07/20 15:06 |

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| S227 | 3 | S220 and (data with paths) | US-PGPUB | OR | OFF | 2017/07/20 15:06 |
| S228 | 2 | S220 and (router with port) | US-PGPUB | OR | OFF | 2017/07/20 15:16 |
| S229 | 8 | S220 and (embed or embedded or inside) | US-PGPUB | OR | OFF | 2017/07/20 15:40 |
| S230 | 2 | S220 and ((embed or embedded or inside) with router) | US-PGPUB | OR | OFF | 2017/07/20 15:49 |
| S231 | 5 | S220 and ((embed or embedded or inside) with sensor) | US-PGPUB | OR | OFF | 2017/07/20 15:50 |
| S232 | 5 | S220 and ((embed or embedded or inside or contained) with sensor) | US-PGPUB | OR | OFF | 2017/07/20 15:51 |
| S233 | 2 | S220 and ((embed or embedded or inside or contained) with router) | US-PGPUB | OR | OFF | 2017/07/20 15:51 |
| S234 | 5 | S220 and ((router or sensor) with integrat$4) | US-PGPUB | OR | OFF | 2017/07/20 15:51 |
| S235 | 12 | S220 and (embedded or embed or integrat$4) | US-PGPUB | OR | OFF | 2017/07/20 15:56 |
| S236 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20150046582-$ or US-20100030421-$ or US-20070283005-$ or US-20130308581-$ or US-20110118888-$ or US-20130139440-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$).did. | US-PGPUB | OR | OFF | 2017/07/20 19:05 |
| S242 | 13 | S236 and device | US-PGPUB | OR | OFF | 2017/07/20 19:06 |
| S243 | 0 | S236 and (routing with phone) | US-PGPUB | OR | OFF | 2017/07/20 19:08 |
| S244 | 2 | S236 and (router with phone) | US-PGPUB | OR | OFF | 2017/07/20 19:08 |
| S245 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 19:22 |
| S246 | 1 | S245 and actuator | US-PGPUB | OR | OFF | 2017/07/20 19:22 |
| S247 | 1,063 | ISM near2 radio near2 band | US-PGPUB | OR | OFF | 2017/07/20 19:44 |
| S248 | 496 | industrial near3 scientific near3 radio near3 band | US-PGPUB | OR | OFF | 2017/07/20 19:44 |

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| S249 | 1 | (industrial near3 scientific near3 radio near3 band) near5 WAN | US-PGPUB | OR | OFF | 2017/07/20 19:45 |
| S250 | 3 | (industrial near3 scientific near3 radio near3 band) with WAN | US-PGPUB | OR | OFF | 2017/07/20 19:46 |
| S251 | 0 | (industrial near3 scientific near3 radio near3 band) near5 internet | US-PGPUB | OR | OFF | 2017/07/20 19:46 |
| S252 | 14 | (industrial near3 scientific near3 radio near3 band) near5 network | US-PGPUB | OR | OFF | 2017/07/20 19:46 |
| S253 | 1 | S236 and (WAN with antenna) | US-PGPUB | OR | OFF | 2017/07/20 19:56 |
| S254 | 1 | S236 and (WAN with modem) | US-PGPUB | OR | OFF | 2017/07/20 19:59 |
| S255 | 1 | (US-20130201316-$).did. | US-PGPUB | OR | OFF | 2017/07/20 20:19 |
| S256 | 157 | (BINDER and Yehuda).in. | USPAT | OR | OFF | 2017/07/20 20:26 |
| S257 | 10 | (MAYTAL and Benjamin).in. | USPAT | OR | OFF | 2017/07/20 20:26 |
| S258 | 4,181 | H04L67/12.cpc. | USPAT | OR | OFF | 2017/07/20 20:27 |
| S259 | 41 | (B60Y2200/30 G06Q2240/00).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S260 | 41 | (B60Y2200/30 or G06Q2240/00).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S261 | 15 | (B60Y2200/30).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S262 | 26 | (G06Q2240/00).cpc. | USPAT | OR | OFF | 2017/07/20 20:29 |
| S263 | 5,119 | (G01C21/00 or B60Y2200/90 or B60Y2200/50 or B60Y2200/40 or G08G1/00 or B60Y2200/13 or B60Y2200/126 or B60Y2200/12 or B60Y2200/11 or B60K31/18 or B60K31/00 or G07C5/008).cpc. | USPAT | OR | OFF | 2017/07/20 20:31 |
| S264 | 10,730 | (348/77 or 348/143 or 370/276 or 700/22 or 700/28 or 701/2 or 701/31.4 or 709/218).ccls. | USPAT | OR | OFF | 2017/07/20 20:33 |
| S265 | 11 | (may and patents).as. | USPAT | OR | OFF | 2017/07/20 20:33 |
| S266 | 6 | (may and patents).aanm. | USPAT | OR | OFF | 2017/07/20 20:34 |
| S267 | 0 | "15657163" | US-PGPUB; USPAT | ADJ | ON | 2017/09/18 11:52 |

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| S268 | 11 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$).did. | US-PGPUB | OR | ON | 2017/09/18 12:22 |
| S269 | 7 | S268 and voice | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:22 |
| S270 | 8 | S268 and (audio or human) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:23 |
| S271 | 42 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US- | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:24 |

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| | | 6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S272 | 25 | S271 and voice | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:25 |
| S273 | 2 | S271 and ((mic or microphone) with voice) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:27 |
| S274 | 31 | S271 and (person or human) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:38 |
| S275 | 17 | (control$4 or operat$4) with (actuator with (human) with voice) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:43 |
| S276 | 7,612 | (control$4 or operat$4) with (actuator with voice) | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:55 |
| S277 | 5 | (control$4 or operat$4) NEAR9 (actuator with voice) NEAR9 network | US-PGPUB; USPAT | OR | ON | 2017/09/18 12:55 |
| S278 | 10 | 2009/0089065 | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:03 |
| S279 | 2 | "20090089065" | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:03 |
| S280 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/19 13:12 |
| S281 | 6 | S280 and building | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:12 |
| S282 | 0 | "15657163" | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:13 |
| S286 | 2 | "13733634" | US-PGPUB; USPAT | ADJ | ON | 2017/09/19 13:13 |
| S287 | 0 | S286 and (client adj2 device) | US-PGPUB; USPAT | ADJ | ON | 2017/09/19 13:13 |
| S288 | 5 | S280 and ((speech or voice) with (command$4 or control$4)) | US-PGPUB; USPAT | OR | ON | 2017/09/19 13:17 |
| S289 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US- | US-PGPUB | OR | ON | 2017/09/27 04:43 |

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| | | 20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | | | | |
| S290 | 7 | S289 and (mic or microphone) | US-PGPUB; USPAT | OR | ON | 2017/09/27 04:43 |
| S291 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/28 01:25 |
| S292 | 7 | S291 and (mic or microphone or micro$1phone) | US-PGPUB; USPAT | OR | ON | 2017/09/28 01:25 |
| S293 | 43 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US- | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:46 |

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| | | 20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S294 | 3,281,126 | S293 and ("same" NEAR4 device) or inside | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:46 |
| S295 | 3,281,126 | S293 and ("same" NEAR4 device) or inside | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:46 |
| S296 | 28 | S293 and (("same" NEAR4 device) or inside) | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:47 |
| S297 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/28 08:51 |
| S298 | 5 | S297 and actuator | US-PGPUB; USPAT | OR | ON | 2017/09/28 08:51 |
| S299 | 7 | S297 and algorithm | US-PGPUB; USPAT | OR | ON | 2017/09/28 09:06 |
| S300 | 13 | S297 and sensor | US-PGPUB; USPAT | OR | ON | 2017/09/28 09:28 |
| S301 | 3 | S297 and (sensor with light) | US-PGPUB; USPAT | OR | ON | 2017/09/28 09:39 |
| S302 | 3 | (US-20070283005-$ or US-20090089065-$ or US-20150046582-$).did. | US-PGPUB | OR | ON | 2017/09/29 04:46 |
| S303 | 1 | S302 and (actuator with physical) | US-PGPUB; USPAT | OR | ON | 2017/09/29 04:47 |
| S304 | 2 | S302 and (actuator) | US-PGPUB; USPAT | OR | ON | 2017/09/29 04:47 |

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|---|---|---|---|---|---|---|
| S305 | 13 | (US-20160062330-$ or US-20090198380-$ or US-20160344745-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20120079149-$ or US-20080307075-$ or US-20090089065-$).did. | US-PGPUB | OR | ON | 2017/09/29 04:53 |
| S306 | 7 | S305 and (mic or microphones) | US-PGPUB; USPAT | OR | ON | 2017/09/29 04:53 |
| S307 | 10 | S305 and (address) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:22 |
| S308 | 6 | S305 and (zigbee) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:30 |
| S309 | 5 | S305 and ("802.11") | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:33 |
| S310 | 4 | S305 and (ISM) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:45 |
| S311 | 2 | S305 and (CDMA) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:48 |
| S312 | 3 | S305 and (UMTS or GSM) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:49 |
| S313 | 8 | S305 and cellular | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:49 |
| S314 | 6 | S305 and (HSPA or LTE or MBWA or "802.2" or GSM or WiMax) | US-PGPUB; USPAT | OR | ON | 2017/09/29 05:54 |
| S315 | 1 | S305 and (applicance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:23 |
| S316 | 43 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US- | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:26 |

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|---|---|---|---|---|---|---|
| | | 20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20160344745-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$).did. or (US-20130308581-$ or US-20110118888-$ or US-20120079149-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S317 | 14 | S316 and (applicance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:26 |
| S318 | 1,015 | network with sensor with (applicance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:28 |
| S319 | 22 | S316 and (appliance or freezer or refrigerator or food or beverage or coffee or tea or cooker or oven) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:28 |
| S320 | 21 | S316 and (appliance or kitchen) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:29 |
| S321 | 3 | S316 and (kitchen) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:29 |
| S322 | 12 | (control$4) with network with kitchen with appliance with (speech or voice) | US-PGPUB; USPAT | OR | ON | 2017/09/29 06:33 |
| S323 | 1 | (US-20170272316-$).did. | US-PGPUB | OR | ON | 2017/09/29 06:36 |
| S324 | 12 | (US-20160062330-$ or US-20090198380-$ or US-20150046582-$ or US-20070283005-$ or US-20130308581-$ or US- | US-PGPUB | OR | ON | 2017/09/29 08:34 |

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|---|---|---|---|---|---|---|
| | | 20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$).did. | | | | |
| S325 | 3 | S324 and (infrared or infra$1red or gamma or xrays or x$1rays) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:34 |
| S326 | 0 | S324 and (actuat$4 with motion) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:40 |
| S327 | 4 | S324 and (actuat$4) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:41 |
| S328 | 2 | S324 and (actuat$4 with (sound or noise or volume or radio or music)) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:49 |
| S329 | 2 | S324 and (actuat$4 with (sound or noise or volume or audio or radio or music)) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:49 |
| S330 | 4 | S324 and (actuat$4 same (sound or noise or volume or audio or radio or music)) | US-PGPUB; USPAT | OR | ON | 2017/09/29 08:49 |
| S331 | 0 | "15657163" | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:02 |
| S332 | 5,777 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:03 |
| S333 | 12,682 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:03 |
| S334 | 25,214 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S335 | 25,214 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S336 | 288 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S337 | 862 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S338 | 194 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:04 |
| S339 | 313 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S340 | 35 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S341 | 110 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S342 | 13 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |

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|---|---|---|---|---|---|---|
| S343 | 91 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S344 | 36,907 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S345 | 155 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S346 | 9,132 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S348 | 15,985 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:05 |
| S349 | 40 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S350 | 42 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S351 | 381 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S352 | 39 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2017/09/29 09:07 |
| S353 | 13,516 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S354 | 5,776 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S355 | 41 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S356 | 387 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S357 | 48 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S358 | 44 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:43 |
| S359 | 0 | (fire and eye).aanm. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S360 | 140 | (fireeye).as. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S361 | 113 | (fireeye).aanm. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S362 | 1 | (US-20130201316-$).did. | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S363 | 674 | (home with network) same sensor same gateway same network | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S364 | 293 | (home with network) with sensor with gateway | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |
| S365 | 5 | (home with network) with sensor with gateway with command | US-PGPUB | ADJ | ON | 2018/01/19 19:44 |

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|---|---|---|---|---|---|---|
| S366 | 22 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S367 | 21 | S366 and (vehicle or vehical or automobile or car) | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S368 | 21 | S366 and (vehicle or vehical or automobile or car) and actuator | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S369 | 15 | S366 and (vehicle or vehical or automobile or car) and actuator and sensor and network and cellular and wireless | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S370 | 15 | S366 and (coupled) | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S371 | 1 | S366 and (router) | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S372 | 1,030 | (vehicle or car) with router with (control or server) with network | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S373 | 18 | (vehicle or car) with router with (control or server) with network with actuator | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S374 | 2 | "20090198380" | US-PGPUB; USPAT | ADJ | ON | 2018/01/19 19:44 |
| S375 | 1,865 | S359 S360 S361 S362 S363 S364 S365 S366 S367 S368 S369 S370 S371 S372 S373 S374 | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:44 |
| S376 | 13,516 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S377 | 27,138 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S378 | 27,138 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |

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| S379 | 293 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S380 | 889 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S381 | 202 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S382 | 329 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S383 | 37 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S384 | 113 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S385 | 17 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S386 | 94 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S387 | 38,949 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S388 | 183 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S389 | 10,308 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S390 | 44,418 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S391 | 17,401 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S392 | 127,924 | S376 S377 S378 S379 S380 S381 S382 S383 S384 S385 S386 S387 S388 S389 S390 S391 | US-PGPUB; USPAT | OR | ON | 2018/01/19 19:45 |
| S393 | 2 | "15657163" | US-PGPUB; USPAT | ADJ | ON | 2018/06/15 17:22 |
| S394 | 1 | (US-20170331899-$).did. | US-PGPUB | OR | OFF | 2018/06/15 17:22 |
| S395 | 1 | (US-20170331899-$).did. | US-PGPUB | OR | OFF | 2018/06/17 15:00 |
| S396 | 1 | S395 and (voice with algorithm) | US-PGPUB | OR | OFF | 2018/06/17 15:00 |
| S397 | 1 | (US-20170331899-$).did. | US-PGPUB | OR | OFF | 2018/06/17 16:04 |
| S398 | 1 | S397 and (sensor with convection) | US-PGPUB | OR | OFF | 2018/06/17 16:04 |
| S399 | 12 | (US-20160062330-$ or US-20090198380-$ or US-20150046582-$ or US- | US-PGPUB | OR | OFF | 2018/06/18 06:55 |

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|---|---|---|---|---|---|---|
| | | 20070283005-$ or US-20130308581-$ or US-20100071053-$ or US-20030105389-$ or US-20130091279-$ or US-20090224906-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$).did. | | | | |
| S400 | 0 | S399 and (voice or audio) | USPAT | OR | OFF | 2018/06/18 06:55 |
| S401 | 0 | S399 and (voice or audio) | USPAT | OR | ON | 2018/06/18 06:55 |
| S402 | 0 | S399 and (voice or audio) | USPAT | OR | OFF | 2018/06/18 06:55 |
| S403 | 0 | S399 and audio | USPAT | OR | OFF | 2018/06/18 06:56 |
| S404 | 0 | S399 and (voice or audio) | USPAT | OR | OFF | 2018/06/18 06:56 |
| S405 | 9 | S399 and (voice or audio) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 06:56 |
| S406 | 5 | S399 and ((voice or audio or speech) with (command or control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 06:58 |
| S407 | 6 | S399 and (mic or microphone) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:02 |
| S408 | 42 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US- | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:16 |

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|---|---|---|---|---|---|---|
| | | 20130139440-$ or US-20130308581-$).did. or (US-20110118888-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$ or US-20170272316-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S409 | 18 | S408 and (mic or microphone) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:16 |
| S410 | 7 | S408 and ((voice or audio or speech) with (command or control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:16 |
| S411 | 5 | S408 and ((voice or audio or speech) NEAR9 (command or control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:17 |
| S412 | 0 | S408 and ((speech with control with process) same (external with server)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:20 |
| S413 | 1 | S408 and ((speech with control with process) same (external)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:21 |
| S414 | 14 | S408 and (( control with process)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:21 |
| S415 | 7 | S408 and (((speech or voice or audio) with control)) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:22 |
| S416 | 7 | S415 and wireless | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:28 |
| S417 | 11 | S399 and (wireless) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 07:28 |
| S418 | 2 | "20050273505" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:53 |
| S419 | 2 | "20060212194" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:53 |
| S420 | 8 | ("20050273505" \| "20060212194" \| "20070096565" \| "20070176740" \| "20080129475" \| "20080136670" \| "20100207754" \| "20130139440").PN. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:55 |
| S421 | 0 | S420 and appliance | USPAT | OR | OFF | 2018/06/18 09:55 |
| S422 | 3 | ("20080307075" \| "20090089065" \| "20170272316").PN. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:55 |

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|---|---|---|---|---|---|---|
| S423 | 0 | S422 and appliance | USPAT | OR | OFF | 2018/06/18 09:55 |
| S424 | 0 | S420 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:56 |
| S425 | 1 | S422 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:56 |
| S426 | 21 | "8447843" | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S427 | 1 | "8447843".pn. | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S428 | 3 | "20080077425" | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S429 | 0 | S428 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:58 |
| S430 | 0 | S428 and kitchen | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:59 |
| S431 | 21 | ("20030009271" \| "20030105389" \| "20060111825" \| "20070021847" \| "20070198144" \| "20070283005" \| "20080100428" \| "20090138136" \| "20090198380" \| "20090224906" \| "20100030421" \| "20100071053" \| "20100211258" \| "20110153149" \| "20120079149" \| "20130091279" \| "20130308581" \| "20140215491" \| "20150046582" \| "20160062330" \| "20160344745").PN. | US-PGPUB; USPAT | OR | OFF | 2018/06/18 09:59 |
| S432 | 7 | S431 and appliance | US-PGPUB; USPAT | OR | ON | 2018/06/18 09:59 |
| S433 | 134 | ("0000001" \| "0000002" \| "0000030" \| "0000058" \| "0000065" \| "0000105" \| "0000135" \| "0000158" \| "0002002" \| "0006263" \| "0006324" \| "0006865" \| "0040919" \| "0064736" \| "0066069" \| "0089847" \| "0500145" \| "0732666" \| "120050044119" \| "120050247573" \| "120070112939" \| "120080263117" \| "120100201531" \| "120110041604" \| "120110222726" \| "14248123" \| "15010399" \| "15134887" \| "15710833" \| "15724456" \| "15987154" \| "16109331" \| "16188777" \| "16329160" \| "16501857" \| "16504942" \| "16549616" \| "16931596" \| "17213061" \| "17317815" \| | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:01 |

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|---|---|---|---|---|---|---|
| | | "17321936" \| "17414186" \| "17598942" \| "17614305" \| "17617729" \| "1784721" \| "20020009383" \| "20020010938" \| "20030092261" \| "20030099228" \| "20040182167" \| "20050000120" \| "20050010957" \| "20050180561" \| "20070132725" \| "20090272193" \| "20100000218" \| "20100162815" \| "20120268373" \| "2171640" \| "3184842" \| "382264836" \| "4019073" \| "4047187" \| "4243631" \| "4317991" \| "4351192" \| "4367027" \| "4414537" \| "4434451" \| "4638364" \| "4759220" \| "4796891" \| "4853884" \| "4857273" \| "4905176" \| "5046022" \| "5047952" \| "5105087" \| "5138459" \| "5274631" \| "5291234" \| "5349129" \| "5386103" \| "5402170" \| "5454043" \| "5488429" \| "5510765" \| "5511547" \| "5578877" \| "5621455" \| "56344119" \| "5652849" \| "5666159" \| "5781650" \| "5818975" \| "5835616" \| "5870138" \| "5896443" \| "5930201" \| "5948965" \| "5962786" \| "5978519" \| "5991456" \| "6069899" \| "6097470" \| "6101271" \| "6128397" \| "6132281" \| "6149312" \| "6151073" \| "6211636393148" \| "6216160" \| "6282317" \| "6285761" \| "6301370" \| "6404900" \| "6407777" \| "6421468" \| "6437576" \| "6452499" \| "6459436" \| "6473199" \| "6476372" \| "6504951" \| "6526161" \| "6535243" \| "6549234" \| "6552743" \| "6670125" \| "6693296216311" \| "6694316" \| "6714021" \| "6747258" \| "67883325" \| "6806722" \| "6820225" \| "6844897" \| "6862353" \| "6895803" \| "6940545" \| "6967565" \| "7010050" \| "7124157" \| "7239577" \| "7256466" \| "7289645" \| "7315630" \| "7327385" \| "7342212" \| "7432952" \| "7466866" \| "7499239" \| "7508961" \| "7653573" \| "7688036" \| "7692320" \| "7716985" \| "7821541" \| "7843336" \| "8016205" \| "8115646" \| "8180492" \| "8214070" \| "95578755" \| "RE00031" \| | | | |

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|---|---|---|---|---|---|---|
| | | "RE33682" \| "T000005" \| "T009255" \| "T092876" \| "T746684").PN. | | | | |
| S434 | 4 | S433 and appliance | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:01 |
| S435 | 4 | S433 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:02 |
| S436 | 1 | "20040267385" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:03 |
| S437 | 1 | S422 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:04 |
| S438 | 0 | S428 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:04 |
| S439 | 5 | S431 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:04 |
| S440 | 44 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US-20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$ or US-20130308581-$).did. or (US-20110118888-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$ or US-20170272316-$ or US-20080077425-$ or US-20040267385-$).did. or (US- | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:05 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S441 | 8 | S440 and (appliance or stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:05 |
| S442 | 1 | S440 and (stove or refrigerator) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:05 |
| S443 | 22 | S440 and (appliance or stove or refrigerator or air$1conditioner or microwave) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:21 |
| S444 | 15 | S440 and (stove or refrigerator or air$1conditioner or microwave) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:21 |
| S445 | 6 | S440 and (stove or refrigerator or air adj conditioner) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:22 |
| S446 | 1 | S440 and (burner or stove or oven) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:26 |
| S447 | 0 | S399 and (burner or stove or oven) | US-PGPUB; USPAT | OR | OFF | 2018/06/18 10:26 |
| S448 | 0 | S399 and (burner or stove or oven) | US-PGPUB; USPAT | OR | ON | 2018/06/18 10:26 |
| S449 | 1 | S440 and (burner or stove or oven) | US-PGPUB; USPAT | OR | ON | 2018/06/18 10:26 |
| S450 | 3 | (US-20160062330-$ or US-20070283005-$ or US-20090089065-$).did. | US-PGPUB | OR | OFF | 2018/06/18 11:23 |
| S451 | 1 | (US-20080077425-$).did. | US-PGPUB | OR | OFF | 2018/06/18 11:27 |
| S452 | 0 | S451 and IoT | US-PGPUB; USPAT | OR | ON | 2018/06/18 11:27 |
| S453 | 44 | (US-20130201316-$ or US-20100030421-$ or US-20120303216-$ or US-20140188343-$ or US-20140236384-$ or US-20070076593-$ or US-20100211258-$ or US-20080100428-$ or US-20060111825-$ or US-20100148940-$ or US-20100201516-$ or US-20110035491-$ or US-20150046582-$ or US-20160062330-$ or US-20060217840-$ or US-20090198380-$ or US-20150295788-$ or US- | US-PGPUB; USPAT | OR | OFF | 2018/06/18 11:27 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 20120253480-$ or US-20070283005-$ or US-20100071053-$ or US-20130091254-$ or US-20140286348-$ or US-20130091279-$ or US-20030105389-$ or US-20130139440-$ or US-20130308581-$).did. or (US-20110118888-$ or US-20080031139-$ or US-20080068156-$ or US-20080307075-$ or US-20170111158-$ or US-20090224906-$ or US-20090089065-$ or US-20170272316-$ or US-20080077425-$ or US-20040267385-$).did. or (US-8140658-$ or US-7844687-$ or US-7797367-$ or US-7020701-$ or US-6859831-$ or US-6832251-$ or US-6826607-$ or US-6735630-$).did. | | | | |
| S457 | 1 | S453 and IoT | US-PGPUB; USPAT | OR | ON | 2018/06/18 11:28 |
| S458 | 1 | S450 and (LAN or (local adj2 area)) | US-PGPUB | OR | ON | 2018/06/18 11:32 |
| S459 | 227 | (yehuda and binder).in. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S460 | 31 | (benjamin and maytal).in. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S461 | 26 | (may and patents).as. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S462 | 39 | (may and patents).aanm. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S463 | 57 | S461 or S462 | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S464 | 253 | S459 or S460 | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S465 | 253 | S463 or S464 | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S466 | 2 | S465 and (vehicle and router and actuator).clm. | US-PGPUB | ADJ | ON | 2018/06/18 12:53 |
| S467 | 9,404 | H04L67/12.cpc. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S468 | 997 | 348/77.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |

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|---|---|---|---|---|---|---|
| S469 | 374 | 700/28.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S470 | 148 | 700/22.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S471 | 1,455 | 709/218.ccls. | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S472 | 12,341 | S467 or S468 or S469 or S470 or S471 | US-PGPUB | ADJ | ON | 2018/06/18 12:54 |
| S473 | 5,776 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S474 | 14,669 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S475 | 29,542 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S476 | 29,542 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S477 | 300 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S478 | 915 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S479 | 217 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S480 | 339 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S481 | 42 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S482 | 128 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S483 | 23 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S484 | 104 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S485 | 41,547 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S486 | 204 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S487 | 11,825 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S488 | 49,737 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S489 | 19,313 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S490 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |

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|---|---|---|---|---|---|---|
| S491 | 55 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S492 | 395 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S493 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S494 | 14,669 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S495 | 19,392 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S496 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S497 | 395 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S498 | 55 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S499 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S500 | 159,408 | S473 S474 S475 S476 S477 S478 S479 S480 S481 S482 S483 S484 S485 S486 S487 S488 S489 S490 S491 S492 S493 S494 S495 S496 S497 S498 S499 | US-PGPUB; USPAT | OR | ON | 2018/06/18 12:59 |
| S501 | 10 | S500 and (vehicle and router and actuator).clm. | US-PGPUB; USPAT | ADJ | ON | 2018/06/18 13:01 |
| S502 | 2 | "15657163" | US-PGPUB; USPAT | OR | OFF | 2018/06/18 13:02 |
| S503 | 1 | S500 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2018/06/18 13:02 |
| S504 | 5,775 | 709/218.ccls. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S505 | 16,337 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S506 | 30,893 | B60K 31/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S507 | 30,893 | B60K 31/18.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S508 | 307 | B60Y2200/11.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S509 | 964 | B60Y2200/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S510 | 228 | B60Y2200/126.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |

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|---|---|---|---|---|---|---|
| S511 | 372 | B60Y2200/13.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S512 | 47 | B60Y2200/30.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S513 | 139 | B60Y2200/40.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S514 | 28 | B60Y2200/50.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S515 | 117 | B60Y2200/90.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S516 | 43,002 | G01C 21/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S517 | 267 | G06Q2240/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S518 | 12,674 | G07C 5/008.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S519 | 52,730 | G08G 1/00 | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S520 | 20,427 | G08G 1/00.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S521 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S522 | 56 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S523 | 396 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S524 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S525 | 16,337 | H04L67/12.cpc. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S526 | 19,576 | 709/218.ccls.. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S527 | 44 | (maytal and benjamin).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S528 | 396 | (binder and yehuda).in. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S529 | 56 | (may and patents).aanm. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S530 | 48 | (may and patents).as. | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |
| S531 | 167,168 | S504 S505 S506 S507 S508 S509 S510 S511 S512 S513 S514 S515 S516 S517 S518 S519 S520 S521 | US-PGPUB; USPAT | OR | ON | 2018/08/30 15:54 |

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|---|---|---|---|---|---|---|
| | | S522 S523 S524 S525 S526 S527 S528 S529 S530 | | | | |
| S532 | 1 | S531 and (human with voice with actuator with client).clm. | US-PGPUB; USPAT | ADJ | ON | 2018/08/30 15:54 |
| S533 | 7 | (US-20160062330-$ or US-20070283005-$ or US-20100071053-$ or US-20130091279-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$).did. | US-PGPUB | OR | OFF | 2018/08/31 12:30 |
| S534 | 90 | ((((vocal voice) near2 (instruction recogni$4 command)) with (instruct$4 teach$4 guid$4 control$4) with (arm actuator cylinder effector end-effector slide servo stepper shuttle loader unloader axis motion robot gantry turntable lifter elevator tool "pick and place")) same server) and @ad<"20120109" | US-PGPUB; USPAT | OR | ON | 2018/12/19 15:08 |
| S535 | 3 | "15657163" | US-PGPUB | OR | OFF | 2018/12/30 19:14 |
| S536 | 5 | "7019646".pn. "20120112970" "20120303150" | US-PGPUB; USPAT | OR | ON | 2020/12/16 16:01 |
| S537 | 15 | ("20010024163" \| "20040217857" \| "20050154494" \| "20050226201" \| "20060265195" \| "20070169080" \| "20070262847" \| "20080221715" \| "20090042533" \| "20090051551" \| "20110082599" \| "20120229283" \| "20120236748" \| "20130048319" \| "20130121239").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 16:03 |
| S538 | 15 | ("20010024163" \| "20040217857" \| "20050154494" \| "20050226201" \| "20060265195" \| "20070169080" \| "20070262847" \| "20080221715" \| "20090042533" \| "20090051551" \| "20110082599" \| "20120229283" \| "20120236748" \| "20130048319" \| "20130121239").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 18:57 |
| S539 | 14 | S538 and sensor | US-PGPUB; USPAT | OR | ON | 2020/12/16 18:57 |
| S540 | 29 | ("0821344" \| "10026116" \| "10213810" \| "10232408" \| "10239094" \| "20010025349" \| "20010041982" \| "20060220830" \| "20070283005" \| "20080031139" \| "20080130520" \| "20090046715" \| | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |

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|---|---|---|---|---|---|---|
| | | "20090076827" \| "20090271002" \| "20100211359" \| "20100298957" \| "20110148651" \| "20110170377" \| "20110298301" \| "20130235197" \| "20150138333" \| "20150324706" \| "20150362954" \| "20180137462" \| "6546297" \| "6813221" \| "9165320" \| "9821344" \| "9908153").PN. | | | | |
| S541 | 8 | S540 and (sensor and actuator) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |
| S542 | 8 | S540 and (sensor and fire) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |
| S543 | 3 | S541 and S542 | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:16 |
| S544 | 4 | ("20020198626" \| "20050216121" \| "20090055019" \| "20120034904").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:17 |
| S545 | 2 | S544 and (sensor and actuator) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:18 |
| S546 | 30 | ("20020112726" \| "20060206155" \| "20070208390" \| "20080291036" \| "20090005720" \| "20090033522" \| "20090105605" \| "20090189981" \| "20100039253" \| "20100100004" \| "20100187832" \| "20100195601" \| "20100281884" \| "20110034912" \| "20110047874" \| "20110050216" \| "20110282168" \| "20120130203" \| "20120179067" \| "20120190292" \| "20120265026" \| "20130151200" \| "20130211858" \| "20150222852" \| "20180242859" \| "4472656" \| "5077512" \| "5696879" \| "8244405" \| "8615374").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:23 |
| S548 | 9 | S546 and (sensor and actuator) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:24 |
| S549 | 8 | S546 and (sensor and fire) | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:24 |
| S550 | 15 | ("20010024163" \| "20040217857" \| "20050154494" \| "20050226201" \| "20060265195" \| "20070169080" \| "20070262847" \| "20080221715" \| "20090042533" \| "20090051551" \| "20110082599" \| "20120229283" \| "20120236748" \| "20130048319" \| "20130121239").PN. | US-PGPUB; USPAT | OR | ON | 2020/12/16 19:26 |
| S551 | 12 | (US-20160062330-$ or US-20070283005-$ or US- | US-PGPUB; USPAT | OR | ON | 2020/12/18 02:34 |

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|---|---|---|---|---|---|---|
| | | 20100071053-$ or US-20130091279-$ or US-20080307075-$ or US-20090089065-$ or US-20170272316-$ or US-20050154494-$ or US-20130121239-$ or US-20010024163-$ or US-20090051551-$).did. or (US-7019646-$).did. | | | | |
| S553 | 4 | S551 and (microphon$2 or mic) | US-PGPUB; USPAT | OR | ON | 2020/12/18 02:35 |

**EAST Search History (Interference)**

<This search history is empty>

12/18/2020 11:41:32 AM
C:\Users\hkhan2\Documents\EAST\Workspaces\15657163.wsp

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**
**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

**U.S.PATENTS** Remove

| Examiner Initial* | Cite No | Patent Number | Kind Code[1] | Issue Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | 8615374 | B1 | 2013-12-24 | Frederick M. Discenzo | |
| | 2 | 4472656 | A | 1984-09-18 | CORNELIS FRANX | |
| | 3 | 8244405 | B2 | 2012-08-14 | Imin Kao | |
| | 4 | 5696879 | A | 1997-12-09 | TROY L. CLINE | |
| | 5 | 5077512 | A | 1991-12-31 | HAROLD J. WEBER | |

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**U.S.PATENT APPLICATION PUBLICATIONS** Remove

| Examiner Initial* | Cite No | Publication Number | Kind Code[1] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | 20100281884 | A1 | 2010-11-11 | John Myron Rawski | |



ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 2 | 20120190292 | A1 | 2012-07-26 | Alan James Skrepcinski | |
| | 3 | 20080291036 | A1 | 2008-11-27 | Robert Charles Richmond | |
| | 4 | 20150222852 | A1 | 2015-08-06 | Ronald Carter | |
| | 5 | 20100187832 | A1 | 2010-07-29 | Scott T. Holland | |
| | 6 | 20090189981 | A1 | 2009-07-30 | Jon Siann | |
| | 7 | 20130151200 | A1 | 2013-06-13 | Siew Kok Hui | |
| | 8 | 20100039253 | A1 | 2010-02-18 | SHIHUA ZANG | |
| | 9 | 20110047874 | A1 | 2011-03-03 | Scott B. Lowder | |
| | 10 | 20090033522 | A1 | 2009-02-05 | Peter Nils Skillman | |
| | 11 | 20180242859 | A1 | 2018-08-30 | Steven Francis LeBoeuf | |
| | 12 | 20110282168 | A1 | 2011-11-17 | Alan Robert Weiss | |



ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

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|---|---|---|---|---|---|---|
| | 13 | 20130211858 | A1 | 2013-08-15 | Peter Ohnemus | |
| | 14 | 20100195601 | A1 | 2010-08-05 | Yan Zhang | |
| | 15 | 20120265026 | A1 | 2012-10-08 | Mohammad Shenasa | |
| | 16 | 20020112726 | A1 | 2002-08-22 | Matthew F. Schmidt | |
| | 17 | 20060206155 | A1 | 2006-09-14 | Tamir Ben-David | |
| | 18 | 20110050216 | A1 | 2011-03-03 | Robert Thomas STONE | |
| | 19 | 20090105605 | A1 | 2009-04-23 | Marcio Marc Abreu | |
| | 20 | 20120179067 | A1 | 2012-07-12 | William Oren Wekell | |
| | 21 | 20120130203 | A1 | 2012-05-24 | Stergios STERGIOU | |
| | 22 | 20110034912 | A1 | 2011-02-10 | Bassel de Graff | |
| | 23 | 20070208390 | A1 | 2007-09-06 | Jeffrey A. Von Arx | |



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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 24 | 20090005720 | A1 | 2009-01-01 | Lev Ludin | |
| | 25 | 20100100004 | A1 | 2010-04-22 | Eugenio Johannes Wilhelmus van Someren | |

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| Examiner Signature | /HASSAN A KHAN/ | Date Considered | 12/16/2020 |
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See attached certification statement.

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| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2020-03-08 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

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|---|---|---|---|---|---|---|
| | 1 | 9821344 | | 2017-11-21 | Fabio Zsigmond | |
| | 2 | 9908153 | | 2018-03-06 | Fabio Zsigmond | |
| | 3 | 10213810 | | 2019-02-26 | Fabio Zsigmond | |
| | 4 | 10232408 | | 2019-03-19 | Fabio Zsigmond | |
| | 5 | 10239094 | | 2019-03-26 | Fabio Zsigmond | |
| | 6 | 9165320 | | 2015-10-20 | Brandon W. Belvin | |
| | 7 | 10026116 | | 2018-07-17 | Meir ZOHAR | |
| | 8 | 6813221 | | 2004-11-02 | Craig Barr | |



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| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 9 | 6546297 | | 2003-04-08 | MICHAEL T. GASTON | |

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|---|---|---|---|---|---|---|
| | 1 | 20150362954 | A1 | 2015-12-17 | MEIR ZOHAR | |
| | 2 | 20180137462 | A1 | 2018-05-17 | MEIR ZOHAR | |
| | 3 | 20060220830 | A1 | 2006-10-05 | Raymond Walden Bennett | |
| | 4 | 20090076827 | A1 | 2009-03-19 | Clemens Bulitta | |
| | 5 | 20090271002 | A1 | 2009-10-29 | David Asofsky | |
| | 6 | 20070283005 | A1 | 2007-12-06 | Robert P. Beliles | |
| | 7 | 20150324706 | A1 | 2015-11-12 | Jeremy B. Warren | |
| | 8 | 20010041982 | A1 | 2001-11-15 | Toshinobu Kawasaki | |



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| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 9 | 20150138333 | A1 | 2015-05-21 | Richard Wayne DeVaul | |
| | 10 | 20080130520 | A1 | 2008-06-05 | Matthew P. Ebrom | |
| | 11 | 20090046715 | A1 | 2009-02-19 | RICHARD A. MCCOY | |
| | 12 | 20010025349 | A1 | 2001-09-27 | John N. Sharood | |
| | 13 | 20110170377 | A1 | 2011-07-14 | Ferdinand Villegas Legaspi | |
| | 14 | 20080031139 | A1 | 2008-02-07 | Keiro Muro | |
| | 15 | 20130235197 | A1 | 2013-09-12 | MATTHEW P. EBROM | |
| | 16 | 20110148651 | A1 | 2011-06-23 | Michael S. Hendrickson | |
| | 17 | 20110298301 | A1 | 2011-12-08 | Simon Wong | |
| | 18 | 20100298957 | A1 | 2010-11-25 | Jaime Sanchez Rocha | |
| | 19 | 20100211359 | A1 | 2010-08-19 | Neelesh B. Mehta | |



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| Examiner Signature | /HASSAN A KHAN/ | Date Considered | 12/16/2020 |
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| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2019-11-14 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

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| Filing Date | 2017-07-23 |
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| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

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| | 1 | 7019646 | B1 | 2006-03-28 | Noel Woodard | |

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| | 1 | 20120112970 | A1 | 2012-05-10 | Ruben Caballero | |
| | 2 | 20120303150 | A1 | 2012-11-29 | Meenakshi Sundaram Krishnaswamy | |

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| | 1 | TP-LINK User Guide TL-POE10R, PoE Splitter, Rev. 3.0.0 Document Number – 7106503409, (Published 2010) (10 pages) | |

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| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2020-09-29 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# Electronic Acknowledgement Receipt

| | |
|---|---|
| **EFS ID:** | 40756215 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 05-OCT-2020 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 11:44:48 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | no |

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Non Patent Literature | TP-Link-TL-POE10R-PoE-Splitter-Manual.pdf | 4494112<br>85a95ab6a9776c15c4fb4951878fa39997e2a9ff | no | 10 |

**Warnings:**

| Information: | | | | | |
|---|---|---|---|---|---|
| 2 | Information Disclosure Statement (IDS) Form (SB08) | IDS13of40land40K.pdf | 1034502<br>936a5fb0623b8b62bd614324e5c149f1b8a587b4 | no | 4 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 5528614 | | |

**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

| PATENT APPLICATION FEE DETERMINATION RECORD<br>Substitute for Form PTO-875 | Application or Docket Number<br>15/657,163 | Filing Date<br>07/23/2017 | ☐ To be Mailed |
|---|---|---|---|

**ENTITY:** ☐ LARGE ☑ SMALL ☐ MICRO

## APPLICATION AS FILED - PART I

| FOR | (Column 1)<br>NUMBER FILED | (Column 2)<br>NUMBER EXTRA | | RATE ($) | FEE ($) |
|---|---|---|---|---|---|
| ☐ BASIC FEE<br>(37 CFR 1.16(a), (b), or (c)) | N/A | N/A | | N/A | |
| ☐ SEARCH FEE<br>(37 CFR 1.16(k), (i), or (m)) | N/A | N/A | | N/A | |
| ☐ EXAMINATION FEE<br>(37 CFR 1.16(o), (p), or (q)) | N/A | N/A | | N/A | |
| TOTAL CLAIMS<br>(37 CFR 1.16(i)) | minus 20 = | * | | x $40 = | |
| INDEPENDENT CLAIMS<br>(37 CFR 1.16(h)) | minus 3 = | * | | x $210 = | |
| ☐ APPLICATION SIZE FEE (37 CFR 1.16(s)) | If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). | | | | |
| ☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j)) | | | | | |
| * If the difference in column 1 is less than zero, enter "0" in column 2. | | | | TOTAL | |

## APPLICATION AS AMENDED - PART II

| | | (Column 1) | | (Column 2) | (Column 3) | | | |
|---|---|---|---|---|---|---|---|---|
| AMENDMENT | 06/22/2020 | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | | RATE ($) | ADDITIONAL FEE ($) |
| | Total<br>(37 CFR 1.16(i)) | * 30 | Minus | ** 30 | = 0 | | x $50 = | 0 |
| | Independent<br>(37 CFR 1.16(h)) | * 1 | Minus | *** 3 | = 0 | | x $230 = | 0 |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | |
| | | | | | | | TOTAL ADD'L FEE | 0 |

| | | (Column 1) | | (Column 2) | (Column 3) | | | |
|---|---|---|---|---|---|---|---|---|
| AMENDMENT | 06/22/2020 | CLAIMS REMAINING AFTER AMENDMENT | | HIGHEST NUMBER PREVIOUSLY PAID FOR | PRESENT EXTRA | | RATE ($) | ADDITIONAL FEE ($) |
| | Total<br>(37 CFR 1.16(i)) | * 30 | Minus | ** 30 | = 0 | | x $50 = | 0 |
| | Independent<br>(37 CFR 1.16(h)) | * 1 | Minus | *** 3 | = 0 | | x $230 = | 0 |
| | ☐ Application Size Fee (37 CFR 1.16(s)) | | | | | | | |
| | ☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j)) | | | | | | | |
| | | | | | | | TOTAL ADD'L FEE | 0 |

| | |
|---|---|
| * If the entry in column 1 is less than the entry in column 2, write "0" in column 3. | LIE |
| ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". | /JACQUELYN L WILLIAMS/ |
| *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". | |
| The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1. | |

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PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**
**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

**U.S.PATENTS** Remove

| Examiner Initial* | Cite No | Patent Number | Kind Code[1] | Issue Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | | | | | |

If you wish to add additional U.S. Patent citation information please click the Add button. Add

**U.S.PATENT APPLICATION PUBLICATIONS** Remove

| Examiner Initial* | Cite No | Publication Number | Kind Code[1] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | 20130121239 | A1 | 2013-05-16 | John Alson Hicks | |
| | 2 | 20130048319 | A1 | 2013-02-28 | William E. Glaub | |
| | 3 | 20120236748 | A1 | 2012-09-20 | Edwin B. Brownrigg | |
| | 4 | 20120229283 | A1 | 2012-09-13 | Cameron MCKENNA | |
| | 5 | 20110082599 | A1 | 2011-04-07 | Makarand Shinde | |

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 6 | 20090051551 | A1 | 2009-02-26 | Hai D. Pham | |
| | 7 | 20090042533 | A1 | 2009-02-12 | Karen D. Lontka | |
| | 8 | 20080221715 | A1 | 2008-09-11 | Paul Krzyzanowski | |
| | 9 | 20070262847 | A1 | 2007-11-15 | Cory L. Grabinger | |
| | 10 | 20070169080 | A1 | 2007-07-19 | Larry Alan Friedman | |
| | 11 | 20060265195 | A1 | 2006-11-23 | Jon A. Woodard | |
| | 12 | 20050226201 | A1 | 2005-10-13 | Brian K. McMillin | |
| | 13 | 20050154494 | A1 | 2005-07-14 | Osman Ahmed | |
| | 14 | 20040217857 | A1 | 2004-11-04 | Gary Lennartz | |
| | 15 | 20010024163 | A1 | 2001-09-27 | Thomas D. Petite | |

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| Examiner Initial* | Cite No | Foreign Document Number[3] | Country Code[2] i | Kind Code[4] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear | T[5] |
|---|---|---|---|---|---|---|---|---|
| | 1 | | | | | | | |

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**NON-PATENT LITERATURE DOCUMENTS** Remove

| Examiner Initials* | Cite No | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published. | T[5] |
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| | 1 | | |

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**EXAMINER SIGNATURE**

| Examiner Signature | | Date Considered | |
|---|---|---|---|

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2020-06-22 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 15657163 |
| **Filing Date:** | 23-Jul-2017 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |

Filed as Small Entity

**Filing Fees for Utility under 35 USC 111(a)**

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Miscellaneous:** | | | | |
| RCE- 1ST REQUEST | 2801 | 1 | 650 | 650 |
| | | **Total in USD ($)** | | **650** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 39781919 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 22-JUN-2020 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 08:49:19 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | DA |
| Payment was successfully received in RAM | $650 |
| RAM confirmation Number | E20206L949441634 |
| Deposit Account | |
| Authorized User | |
| The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: | |

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Request for Continued Examination (RCE) | sb0030-RCE.pdf | 1349945<br>887da2696ceebd3f117248de1494fc08f953de2e | no | 3 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Amendment Submitted/Entered with Filing of CPA/RCE | 40C-After-Appeal-RCE-OA-Response.pdf | 38431<br>bfd4cbc9c593031c1879f7b322595800b1981aea | no | 9 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Information Disclosure Statement (IDS) Form (SB08) | IDS12-of-40J.pdf | 1035020<br>1db0ec8bc21b917e3a4963547554b817b6c7d381 | no | 5 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 4 | Fee Worksheet (SB06) | fee-info.pdf | 30135<br>edc11385143ff08640eadbb870e195fed46aad42 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 2453531 | | |

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**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

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Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (02-18)
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# REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
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|---|---|---|---|---|---|---|---|
| Application Number | 15/657,163 | Filing Date | 2017-07-23 | Docket Number (if applicable) | BINDER-014-US3 | Art Unit | 2456 |
| First Named Inventor | Yehuda Binder | | | Examiner Name | Khan, Hassan A. | | |

**This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.**
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

### SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

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☒ Amendment/Reply

☒ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other _____

### MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

### FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 506726

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

X Patent Practitioner Signature

Applicant Signature

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| Signature of Registered U.S. Patent Practitioner | | | |
|---|---|---|---|
| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2020-06-22 |
| Name | BINDER Yehuda | Registration Number | 73612 |

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

ATTY.'S DOCKET: BINDER-014-US3

| | | |
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| In re Application of: | ) | Confirmation No. 1088 |
| | ) | |
| Yehuda BINDER | ) | Art Unit: 2456 |
| | ) | |
| Appln. No.: 15/657,163 | ) | Examiner: Khan, Hassan A. |
| | ) | |
| Filed: July 23, 2017 | ) | Washington, D.C. |
| | ) | |
| For: System and method for Server-based control | ) | June 22, 2020 |
| | ) | |

**AMENDMENT:**

Honorable Commissioner for Patents
U.S. Patent and Trademark Office
Randolph Building, Mail Stop Amendments
401 Dulany Street
Alexandria, VA 22314

Sir:

As part of RCE, in response to the examiner's action dated September 4, 2018 (hereinafter the "**Action**"), kindly amend the above-identified application as follows:

**Amendments** to the Claims appear in the Listing of Claims that begins on page **2** of this paper, and

**Remarks / Comments** begin on page **8** of this paper.

**Amendments to the claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for operating ~~an~~ multiple actuators in a controlled device in response to captured human voice data, for use with a client device in a building communicating over a wireless network and an Internet-connected server device external to the building, the method comprising:

capturing, by a microphone in the client device, a first ~~the~~ human voice data;

sending to the server, by the client device via the wireless network, the captured first human voice data;

receiving, by the server over the Internet, the captured first human voice data;

processing, by the server, the captured first human voice data;

responsive to the processing, sending a first message, by the server to the controlled device over the Internet;

receiving, by the controlled device via the wireless network, the first message; ~~and~~

operating a first ~~the~~ actuator in the controlled device in response to the received first message~~.~~;

capturing, by a microphone in the client device, a second human voice data;

sending to the server, by the client device via the wireless network, the captured second human voice data;

receiving, by the server over the Internet, the captured second human voice data;

processing, by the server, the captured second human voice data;

responsive to the processing, sending a second message, by the server to the controlled device over the Internet;

receiving, by the controlled device via the wireless network, the second message; and

operating a second actuator in the controlled device in response to the received second message.

2. (Original) The method according to claim 1, wherein the controlled device is part of, integrated with, or the same as, the client device.

3. (Original) The method according to claim 1, wherein the processing comprises performing a voice recognition algorithm for identifying the voice of a specific person.

4. (Currently amended) The method according to claim 1, wherein the client device further comprises a sensor that outputs sensor data that responds to a physical phenomenon, wherein the method further comprising sending to the server, by the client device via the wireless network, the sensor data, and wherein the first message is sent by the server in response to the sensor data.

5. (Previously presented) The method according to claim 4, wherein the sensor is a thermoelectric sensor that responds to a temperature or to a temperature gradient of an object using conduction, convection, or radiation, or wherein the sensor is a photoelectric sensor that responds to a visible or an invisible light or gamma rays.

6. (Currently amended) The method according to claim 1, wherein each of the first and second actuators ~~actuator~~ is directly or indirectly affecting, changing, producing, or creating a physical phenomenon.

7. (Original) The method according to claim 6, wherein the physical phenomenon comprises temperature, humidity, pressure, audio, vibration, light, motion, sound, proximity, flow rate, electrical voltage, or electrical current.

8. (Original) The method according to claim 1, wherein the client device comprises multiple microphones, and wherein the capturing comprises capturing, by the multiple microphones in the client device, the human voice data.

9. (Original) The method according to claim 8, wherein the multiple microphones are arranged as a directional microphones array operative to estimate a number, magnitude, frequency, Direction-Of-Arrival (DOA), distance, or speed of a phenomenon impinging the microphones array.

10. (Previously Presented) The method according to claim 1, wherein the microphone is an omnidirectional, unidirectional, or bidirectional microphone that is based on the sensing an incident sound based motion of a diaphragm or a ribbon, or wherein the microphone comprises a condenser, an electret, a dynamic, a ribbon, a carbon, or a piezoelectric microphone.

11. (Previously presented) The method according to claim 1, wherein the client device or the controlled device are addressable in the wireless network or the Internet using an address stored in a volatile or non-volatile memory of the respective device for uniquely identifying the respective device in the network.

12. (Currently amended) The method according to claim 11, wherein the ~~digital~~ address is a Media Access Control (MAC) layer address that is MAC-48, Extended Unique Identifier (EUI) EUI-48, or EUI-64 address type or wherein the ~~digital~~ address is a layer 3 address and is static or dynamic Internet Protocol (IP) address that is IPv4 or IPv6 type address.

13. (Previously presented) The method according to claim 1, wherein the wireless network is a Wireless Personal Area Network (WPAN), that is according to, or based on, Bluetooth™ or Institute of Electrical and Electronics Engineers (IEEE) 802.15.1-2005 standards, or wherein the WPAN is a wireless control network that is according to, or based on, Zigbee™, IEEE 802.15.4-2003, or Z-Wave™ standards.

14. (Previously presented) The method according to claim 1, wherein the wireless network is a Wireless Local Area Network (WLAN) that is according to, or base on, IEEE 802.11-2012, IEEE 802.11a, IEEE 802.11b, Institute of Electrical and Electronics Engineers (IEEE) IEEE 802.11g, IEEE 802.11n, or IEEE 802.11ac.

15. (Original) The method according to claim 1, wherein the wireless network uses a wireless communication over a licensed or an unlicensed radio frequency band, that is an Industrial, Scientific and Medical (ISM) radio band.

16. (Previously presented) The method according to claim 1, wherein the wireless network is a cellular telephone network that is a Third Generation (3G) network that uses Universal Mobile Telecommunications System (UMTS), Wideband Code Division Multiple Access (W-CDMA) UMTS, High Speed Packet Access (HSPA), UMTS Time-Division Duplexing (TDD), CDMA2000 1xRTT, Evolution - Data Optimized (EV-DO), or Global System for Mobile communications (GSM), Enhanced Data rates for GSM Evolution (EDGE) EDGE-Evolution, or wherein the cellular telephone network is a Fourth Generation (4G) network that uses Evolved High Speed Packet Access (HSPA+), Mobile Worldwide Interoperability for Microwave Access (WiMAX), Long-Term Evolution (LTE), LTE-Advanced, Mobile Broadband Wireless Access (MBWA), or is based on IEEE 802.20-2008.

17. (Previously Presented) The method according to claim 1, wherein the client device or the controlled device is



Amazon EX1004 Page 348

integrated in, is part of, or is entirely included in, an appliance.

18. (Original) The method according to claim 17, wherein the primary functionality of the appliance is associated with food storage, handling, or preparation.

19. (Original) The method according to claim 18, wherein the primary function of the appliance is heating food, and wherein the appliance is a microwave oven, an electric mixer, a stove, an oven, or an induction cooker.

20. (Original) The method according to claim 18, wherein the appliance is a refrigerator, a freezer, a food processor, a dishwashers, a food blender, a beverage maker, a coffeemaker, or an iced-tea maker.

21. (Previously presented) The method according to claim 17, wherein the primary function of the appliance is associated with environmental control, and the appliance is part of an Heating, Ventilation and Air Conditioning (HVAC) system.

22. (Original) The method according to claim 21, wherein the primary function of the appliance is associated with temperature control, and wherein the appliance is an air conditioner or a heater.

23. (Previously presented) The method according to claim 17, wherein the primary function of the appliance is associated with cleaning, wherein the appliance primary function is associated with clothes cleaning and the appliance is a washing machine, or wherein the appliance is a vacuum cleaner.

24. (Previously presented) The method according to claim 17, wherein the appliance is an answering machine, a telephone set, a home cinema system, a High Fidelity (HiFi) system, a Compact Disc (CD) or Digital Video Disc (DVD) player, an electric furnace, a trash compactor, a smoke detector, a light fixture, or a dehumidifier.

25. (Currently amended) The method according to claim 1, wherein the first actuator is an electric light source for converting electrical energy into light that emits visible or non-visible light for illumination or indication, and the non-visible light is infrared, ultraviolet, X-rays, or gamma rays.

26. (Previously Presented) The method according to claim 25, wherein the electric light source comprises a lamp, an incandescent lamp, a gas discharge lamp, a fluorescent lamp, a Solid-State Lighting (SSL), a Light Emitting Diode (LED), an Organic LED (OLED), a polymer LED (PLED), or a laser diode.

27. (Currently amended) The method according to claim 1, wherein the first actuator is a motion actuator that causes linear or rotary motion.

28. (Currently amended) The method according to claim 1, wherein the first actuator is a sounder for converting an electrical energy to omnidirectional, unidirectional, or bidirectional pattern emitted, audible or inaudible, sound waves.

29. (Previously presented) The method according to claim 28, wherein the sounder comprises an electromagnetic loudspeaker, a piezoelectric speaker, an electrostatic loudspeaker (ESL), a ribbon or planar magnetic loudspeaker, or a bending wave loudspeaker, or wherein the sounder comprises an electric bell, a buzzer, a chime, a whistle, or a ringer.

30. (Currently amended) The method according to claim 28, wherein the operating of the first actuator comprises playing digital audio content that is pre-recorded or synthesized, or wherein the operating of the first actuator comprises simulating the voice of a human being or generating music, or wherein the operating of the first actuator comprises sounding a syllable, a word, a phrase, a sentence, a short story, or a long story, using male or female voice.

**REMARKS / COMMENTS**

While the applicant disagrees with the Appeal Decision, the claims are amended to better define over the cited prior art.



Amazon EX1004 Page 351

The absence of a reply to a specific rejection, issue, or comment, does not signify agreement with that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims that have not been expressed.

Nothing in this reply should be understood as conceding any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claims does not necessarily signify concession of unpatentability to the claim before its amendment. It should further be understood that any filing of a terminal disclaimer to obviate a rejection based on nonstatutory double patenting is not an admission of the propriety of the rejection.

If the above arguments should not now place the application in the condition for allowance, the examiner is invited to call undersigned counsel to resolve any remaining issues.

Respectfully submitted,

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 15/657,163 | 07/23/2017 | Yehuda BINDER | BINDER-014-US3 | 1088 |

131926 7590 05/04/2020

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| EXAMINER | |
|---|---|
| KHAN, HASSAN ABDUR-RAHMAN | |

| ART UNIT | PAPER NUMBER |
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| 2456 | |

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| 05/04/2020 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* YEHUDA BINDER and BENJAMIN MAYTAL

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Appeal 2019-002056
Application 15/657,163
Technology Center 2400

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Before JOHN A. JEFFERY, JUSTIN BUSCH, and
LINZY T. McCARTNEY, *Administrative Patent Judges.*

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Under 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–30. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as May Patents Ltd. Appeal Br. 1.

## STATEMENT OF THE CASE

Appellant's invention is a voice control system used in connection with a building, where the system uses a server implementing gateway or control functionalities. *See* Abstract; Spec. 1, 178–80; Fig. 19. Controller functionality can be integrated in a server external to the building. *See* Spec. 162–63; Figs. 15–15a. Claim 1 is illustrative:

> 1. A method for operating an actuator in a controlled device in response to captured human voice data, for use with a client device in a building communicating over a wireless network and an Internet-connected server device external to the building, the method comprising:
>
> capturing, by a microphone in the client device, the human voice data;
>
> sending to the server, by the client device via the wireless network, the captured human voice data;
>
> receiving, by the server over the Internet, the captured human voice data;
>
> processing, by the server, the captured human voice data;
>
> responsive to the processing, sending a message, by the server to the controlled device over the Internet;
>
> receiving, by the controlled device via the wireless network, the message; and
>
> operating the actuator in the controlled device in response to the received message.

## RELATED APPEALS

Appellant informs us of three related appeals in copending applications (1) 13/733,634; (2) 15/361,434; and (3) 15/716,881. Appeal Br. 2. One of these appeals, namely the appeal in the '634 application, has been decided. *See Ex parte Binder*, Appeal 2018-007694 (PTAB Mar. 2, 2020)

("Bd. Dec."). In that appeal, among other things, we affirmed the Examiner's obviousness rejections that cited two of the three references at issue here, namely Beliles and Abe cited below. *See* Bd. Dec. 32–54.

## THE REJECTION[2]

The Examiner rejected claims 1–30 under 35 U.S.C. § 103 as unpatentable over Beliles (US 2007/0283005 A1; published Dec. 6, 2007), Buck (US 2009/0089065 A1; published Apr. 2, 2009), and Abe (US 2012/0253480 A1; published Oct. 4, 2012). Final Act. 17–28.[3]

## FINDINGS, CONCLUSIONS, AND CONTENTIONS

Regarding independent claim 1, the Examiner finds that Beliles uses a client device in a building communicating over a wireless network and an Internet-connected server device external to the building. Final Act. 17. Although the Examiner acknowledges that Beliles does not (1) capture human voice data by a microphone in the client device; (2) operate an actuator in a controlled device responsive to the captured voice data; and (3) send the voice data to the server via the wireless network, where the server receives the voice data over the Internet, the Examiner cites Buck as teaching these features. Final Act. 18–19. The Examiner also acknowledges that the Beliles/Buck system does not (1) process the captured voice data;

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[2] Because the Examiner withdrew rejections under §§ 101 and 112 (Ans. 3–4), those rejections are not before us.

[3] Throughout this opinion, we refer to (1) the Final Office Action mailed September 4, 2018 ("Final Act."); (2) the Appeal Brief filed October 3, 2018 ("Appeal Br."); (3) the Examiner's Answer mailed January 4, 2019 ("Ans."); and (4) the Reply Brief filed January 13, 2019 ("Reply Br.").

(2) send a message to the controlled device that is received by the controlled device; and (3) operate the actuator in the controlled device responsive to the received message, but cites Abe for teaching these features in concluding that the claim would have been obvious. Final Act. 19–20.

Appellant argues that the Examiner improperly combined the cited references. Appeal Br. 45–58; Reply Br. 2–5. According to Appellant, not only is the Examiner's proposed combination unclear, Beliles and Buck are non-analogous, and adding voice processing capabilities to Beliles as the Examiner proposes changes Beliles's principle of operation. Appeal Br. 45–49. Appellant further contends that the Examiner's articulated rationale to combine the references is improper because (1) the primary reference, Beliles, already has the capabilities for which Abe was cited; (2) it is unclear why these two references are analogous to each other; (3) the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in the Examiner's earlier restriction requirement; and (4) the Examiner picks and chooses subject matter from different embodiments in Abe to arrive at the claimed invention. Appeal Br. 53–58; Reply Br. 3–5. Appellant adds that Buck does not teach the voice data sending and receiving steps, and Beliles does not teach the recited Internet-connected server external to a building and wireless network. Appeal Br. 58–60; Reply Br. 5. Appellant argues various other recited limitations summarized below.

## ISSUES

Under § 103, has the Examiner erred by finding that Beliles, Buck, and Abe collectively would have taught or suggested:

(1) operating an actuator in a controlled device responsive to captured human voice data, where the method is used with a client device in a building communicating over a wireless network and an Internet-connected server device external to the building, where the client device sends the voice data to the server via the wireless network, and the server receives that data over the Internet as recited in claim 1?

(2) the particular limitations recited in dependent claims 2–5, 8, 9, 11, and 13–30?

II. Is the Examiner's proposed combination of the cited references supported by articulated reasoning with some rational underpinning to justify the Examiner's obviousness conclusion?

## ANALYSIS

### *Claims 1, 6, 7, and 10*

On this record, we are not persuaded of error in the Examiner's obviousness rejection of independent claim 1. As shown in Beliles's Figure 1 reproduced below, Beliles discloses a computer network 100 in a building comprising, among other things, fire sensor 123 connected to sensor translator 132 that is, in turn, connected to a network device (router 152) that is connected to network cloud 110 to which fire suppression device 161, door locks 162, and other physical control devices are connected. *See* Beliles ¶¶ 15–17, 27–29, 34.

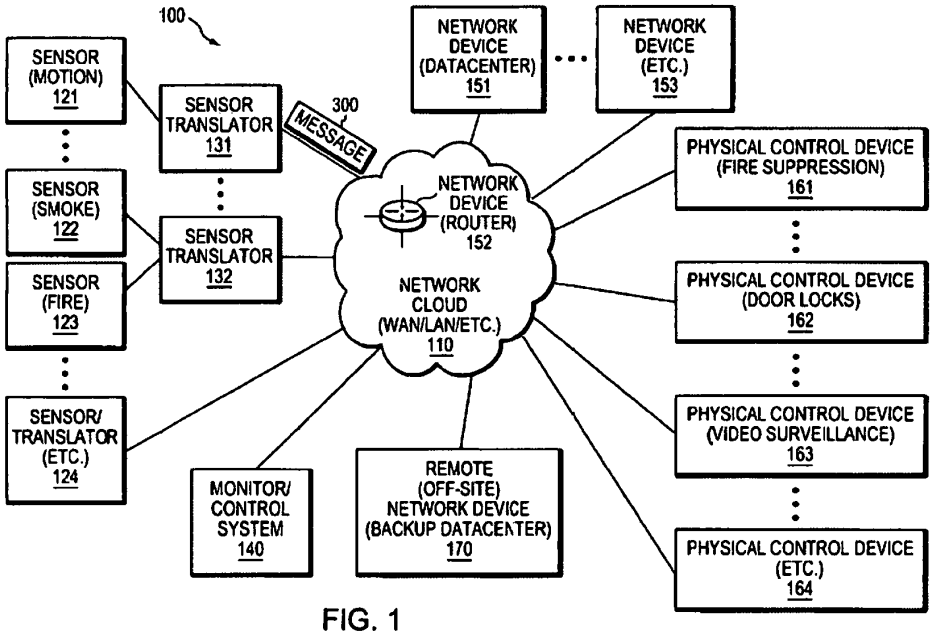



FIG. 1

**Beliles's computer network 100 in Figure 1**

As shown above, network cloud 110 is connected to various network devices 151–153 that include data centers, routers, personal computers, etc. Beliles ¶ 29. These network devices, detailed in Beliles's Figure 2 and paragraphs 31 to 33, are "client devices" at least with respect to the external monitoring/control system 140 that corresponds to the recited Internet-connected server device consistent with the Examiner's mapping. *See* Final Act. 17; Ans. 5–7 (citing Beliles ¶¶ 15–16, 34).

Although physical events, such as detected fires, can be conveyed from the sensors to monitoring/control system 140 using proprietary signaling systems, such as an internal fire alarm system, these events can also be sent over the Internet. Beliles ¶ 34. To the extent that Appellant contends that this Internet-based functionality must be limited to an internal

network within the building, and somehow cannot involve an external network (*see* Reply Br. 59–60), we disagree. Not only is there no persuasive evidence on this record to substantiate Appellant's contention, ordinarily skilled artisans would understand that external networks are the very essence of the Internet and the *World Wide* Web. Therefore, Beliles at least suggests an external network.

Nor does Appellant persuasively rebut the Examiner's reliance on Beliles's paragraph 27 for teaching communicating over a wireless network, particularly since Beliles teaches in that paragraph that network 100 may be configured as a wireless network. We likewise see no error in the Examiner's reliance on Beliles's monitoring/control system 140 for teaching the recited Internet-connected server device. *See* Ans. 5–7 (citing Beliles ¶ 34).

We also see no error in the Examiner's reliance on Buck for at least suggesting (1) capturing human voice data by a microphone in a client device, namely a vehicle; and (2) sending the voice data to the server via a wireless network, where the server receives the voice data over the Internet. Final Act. 18–19; Ans. 7. As shown in Buck's Figure 4, the system converts spoken words into commands using speech recognition device 402 connected to vehicle buses 408 and actuator 406. Buck ¶ 28. Notably, the buses may be *wireless* and convey control and/or actuator signals to *remote (e.g., out-of-vehicle)* destinations. *Id.*

Given this functionality, Buck at least suggests sending captured voice data wirelessly to a remote destination external to the vehicle. Although Buck does not specify these remote destinations that receive the captured voice data, we nonetheless see no reason why these destinations cannot

include Internet-connected servers as the Examiner indicates. *See* Final Act. 18; Ans. 7. To the extent Appellant contends otherwise, there is no persuasive evidence on this record to substantiate such a contention.

Given the Beliles/Buck system's Internet-based functionality, we see no error in the Examiner's reliance on Abe merely to show that providing an Internet-based control apparatus 101 that is external to a building is known in the art as shown in Abe's Figure 15, and that providing such external control functionality in connection with the Beliles/Buck system would have been at least an obvious variation. *See* Final Act. 19–20; Ans. 6; *see also* Abe ¶ 93. That (1) detected events associated with fires can be conveyed *over the Internet* from the sensors to monitoring/control system 140 as noted in Beliles's paragraph 34, and (2) captured voice data is sent *wirelessly* to a *remote* destination in Buck's paragraph 28 only bolsters the Examiner's findings and conclusions in this regard.

Nor does Appellant persuasively rebut the Examiner's mapping of Abe's control apparatus 101 to a control server (*see* Ans. 6)—a mapping that we find reasonable on this record given the control apparatus's external control capabilities for in-building networked sensor-based systems via Internet 300 in Figure 15. *See* Abe ¶¶ 93–96. As the Examiner indicates, Abe's in-building systems in Figure 15 include image display device 51 and air conditioner 52 that are controlled devices with actuators. *See* Ans. 6; Abe ¶ 95.

Given this functionality considered in light of the other cited references' teachings, we see no error in the Examiner's reliance on Abe for teaching (1) processing captured voice data received from the Beliles/Buck system; (2) sending a message to the controlled device over the Internet,

where the message is received by the controlled device via a wireless network; and (3) operating an actuator in the controlled device responsive to the received message. *See* Final Act. 19–20; Ans. 6.

Appellant's arguments regarding the alleged individual shortcomings of Beliles, Buck, and Abe (Appeal Br. 58–60) are unavailing where, as here, the rejection is based on the cited references' collective teachings. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Nor are we persuaded of error in the Examiner's rationale for combining Beliles, Buck, and Abe despite Appellant's arguments to the contrary (*see* Appeal Br. 45–58; Reply Br. 2–5). First, we see no error in the Examiner's articulated rationale for combining Beliles and Buck, namely to provide hands-free actuator control and operation using voice commands in connection with Beliles's system. *See* Final Act. 18–19; Ans. 4–5. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007).

To be sure, if the Examiner's proposed modification renders the prior art unsatisfactory for its intended purpose, the Examiner has failed to make a prima facie case of obviousness. *See In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). But that is not the case here. Providing voice-based control, such as that in Buck, in connection with Beliles's system as the Examiner proposes would not render Beliles's system unsuitable for its intended purpose as Appellant seems to suggest (*see* Appeal Br. 48–49), but would merely provide *additional* voice-based control capabilities to at least augment Beliles's sensor-based control system—an enhancement yielding a predictable result. *Accord* Ans. 4 (noting that combining Buck with Beliles

*improves* Beliles's system by *adding* human speech recognition and actuator voice control).

We see no error in the Examiner's proposed combination despite the fact that Buck's voice control system is used in connection with a vehicle. As noted previously, Buck's *wireless* buses 408 in Figure 4 convey control and/or actuator signals to *remote (e.g., out-of-vehicle)* destinations. Buck ¶ 28. Because Buck at least suggests sending captured voice data wirelessly to a remote destination external to the vehicle for control purposes, Buck is at least reasonably pertinent to Appellant's problem of sending captured data to a remote location for processing and control and, therefore, is analogous art. *See In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (noting that prior art is analogous if it is (1) from the same field of endeavor regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved).

We reach this conclusion despite Beliles's and Buck's different patent classifications as Appellant indicates. *See* Appeal Br. 46–47. Although these diverse classifications can constitute *some* evidence of "non-analogy," this evidence is far outweighed by the references' structural and functional similarities that render them analogous art. *See In re Ellis*, 476 F.2d 1370, 1372 (CCPA 1973) (noting that (1) diverse patent office classification of prior art references is some evidence of "non-analogy," and (2) cross-references in official search notes is some evidence of "analogy," the similarities and differences in structure and function of the references' disclosed inventions carry far greater weight).

Appellant's reliance on a non-precedential Board decision that, according to Appellant, held that a vehicle-based control was non-analogous

to a similar function in a building (Appeal Br. 46), is unavailing. Not only do the facts in that case differ from those at issue here, as a non-precedential decision, it is not binding on this panel in any event. *See* PTAB Standard Operating Procedure 2 (Rev. 10) ("SOP 2") § I(B), https://www.uspto.gov/sites/default/files/documents/SOP2%20R10%20FINAL.pdf.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 47), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Nor are we persuaded of error in the Examiner's rationale for combining Abe with the Beliles/Buck system despite Appellant's arguments to the contrary (*see* Appeal Br. 53–58; Reply Br. 3–5). A key aspect of the Examiner's rationale relies on the functionality of Abe's control apparatus in Figures 15 and 16. *See* Ans. 6. Given this functionality, the Examiner concludes that it would have been obvious to implement an internet-connected control server that (1) acquires and processes information, and (2) sends associated control commands over the Internet to a controlled device and actuator when an abnormality occurs. *See* Final Act. 20; Ans. 6.

We see no error in these findings and conclusions. Although the Examiner's citation to paragraphs 50 and 51 on page 19 of the Final Office Action pertains to Abe's first disclosed embodiment, we nevertheless see no reason why this control apparatus functionality could not also be provided in conjunction with that of Abe's second embodiment in Figure 15 as the Examiner proposes despite Appellant's arguments to the contrary (Appeal Br. 55). First, although Figure 15's embodiment uses a control apparatus 101 instead of control apparatus 100 in Figure 1, the two respective control apparatuses are nonetheless strikingly similar in many respects. As shown in Abe's Figures 2 and 16, control apparatus 101 has the same sections 11–15 as control apparatus 100, including control rule accumulation section 14. Given this striking similarity, the Examiner's reliance on Abe's first and second embodiments is reasonable, at least regarding the particular functionality from these embodiments on which the Examiner relies. We reach this conclusion even assuming, without deciding, that control apparatus 100 in Abe's Figure 2 is inside a building, unlike control apparatus 101 in Figure 15 as Appellant contends (Appeal Br. 55). Despite these

purported differences, the control apparatues' structure and control functionalities are nonetheless strikingly similar as noted above and we, therefore, see no error in the Examiner's reliance on teachings from these embodiments in the rejection.

Second, it is well settled that "[c]ombining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness." *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009). That is the case here. In short, in light of Abe, the Examiner's proposed enhancement to the Beliles/Buck system is not based on impermissible hindsight as Appellant alleges (Reply Br. 21), but rather uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Appellant's contention that it is ostensibly unclear why Beliles and Abe are analogous *to each other* (Appeal Br. 54) is unavailing. Prior art is analogous if it is (1) from the same field of endeavor as the invention, regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved. *Bigio*, 381 F.3d at 1325. The analogous art test, then, does not ask whether the prior art references are analogous *to each other* as Appellant seems to suggest (*see* Appeal Br. 54), but rather asks whether the references are analogous to the claimed subject matter. *See id.; see also In re Kahn*, 441 F.3d 977, 986-87 (Fed. Cir. 2006). Because Beliles and Abe both involve environment control networks as the Examiner indicates (Ans. 6), the references are not only in the same field of endeavor as Appellant's invention, but they are also reasonably pertinent to Appellant's problem in that regard.

Lastly, we find unpersuasive Appellant's contention that the Examiner's combining Beliles and Abe is improper because both systems are ostensibly self-contained and independently operate effectively. *See* Appeal Br. 57–58. To be sure, the court in *Kinetic Concepts* noted that because two cited prior art references independently accomplished similar functions, namely draining fluids, each device independently operated effectively such that ordinarily skilled artisans seeking to create a better device to drain fluids from a wound would have no reason to combine the features of both devices into a single device. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1369 (Fed. Cir. 2012).

Not only are the facts in *Kinetic Concepts* regarding draining fluids from a wound entirely different from those at issue here, we also note that familiar items may have obvious uses beyond their primary purposes, and often ordinarily skilled artisans can fit multiple references' teachings together like puzzle pieces, as is the case here. *See KSR*, 550 U.S. at 420. On this record, then, the Examiner's proposed enhancement to the Beliles/Buck system, namely (1) processing captured voice data received from the Beliles/Buck system; (2) sending a message to the controlled device over the Internet, where the message is received by the controlled device via a wireless network; and (3) operating an actuator in the controlled device responsive to the received message (*see* Final Act. 19–20; Ans. 6) uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 6, 7, and 10 not argued separately with particularity.

*Claim 2*

We also sustain the Examiner's rejection of claim 2 reciting that the controlled device is part of, integrated with, *or* the same as, the client device. Our emphasis on the term "or" underscores that only one recited alternative need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 60–61), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 20; Ans. 7 (citing Buck ¶¶ 20, 31, 50).

To the extent that Appellant contends that the Examiner's findings regarding the limitations of claim 2 are inconsistent with claim 1 (*see* Appeal Br. 60), we disagree. In rejecting independent claim 1, the Examiner finds that Buck teaches, among other things, that a *client device* sends captured voice data to a server via a wireless network. *See* Final Act. 18. As Buck explains in paragraph 28, the vehicle's wireless buses convey control and/or actuator signals to *remote (e.g., out-of-vehicle)* destinations. Given this disclosure in light of the Examiner's findings, we see no reason why a vehicle and its data processing and transmission components cannot be a "client device" as claimed, particularly given the client-based voice data generated in Buck's vehicle that is sent to remote destinations which, as noted previously, include servers under the Examiner's interpretation. *See* Final Act. 18; Ans. 7.

In rejecting dependent claim 2, the Examiner finds that the controlled device, namely Buck's seating system, electronic entertainment, etc., is *part of* the client device, namely the vehicle. Final Act. 20 (citing Buck ¶ 20).

These findings not only satisfy the recited "part of" alternative noted above, they are also consistent with those made for independent claim 1.

In short, Appellant fails to persuasively rebut the Examiner's finding that Buck teaches a "controlled device," for example, a seating system, that is part of a "client device," namely a vehicle or related system. *See* Final Act. 18–19; Ans. 18.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 2.

*Claim 3*

We also sustain the Examiner's rejection of claim 3 reciting that the processing comprises performing a voice recognition algorithm for identifying the voice of a specific person. Despite Appellant's arguments to the contrary (Appeal Br. 61–62; Reply Br. 5), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 20; Ans. 7–8 (citing Buck ¶¶ 37–38; Abe, Fig. 16).

In short, Appellant does not persuasively rebut the Examiner's finding that Buck teaches the recited voice recognition algorithm, and that it would have been obvious to process that algorithm at a remote server, such as that disclosed by Abe. *See* Ans. 8. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417. Appellant's arguments regarding Buck's individual shortcomings in this regard (Appeal Br. 61–62) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 3.

*Claim 4*

We also sustain the Examiner's rejection of claim 4 reciting, in pertinent part, that (1) the client sends sensor data to the server via the wireless network, and (2) the server sends the message responsive to the sensor data. Despite Appellant's arguments to the contrary (Appeal Br. 62), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 21; Ans. 8 (citing Beliles ¶¶ 52, 54; Figs. 1, 6; Abe, Fig. 15). Appellant's arguments regarding Beliles's individual shortcomings in this regard (Appeal Br. 62) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 4.

*Claim 5*

We also sustain the Examiner's rejection of claim 5 reciting, in pertinent part, the sensor is (1) a thermoelectric sensor that responds to a temperature *or* to a temperature gradient of an object using conduction, convection, or radiation, *or* (2) a photoelectric sensor that responds to a visible or an invisible light or gamma rays. Our emphasis on the term "or" underscores that only one of the recited sensors need be taught or suggested by the prior art to satisfy the claim.



Amazon EX1004 Page 371

Despite Appellant's arguments to the contrary (Appeal Br. 63), we see no error in the Examiner's reliance on Beliles for at least suggesting the recited thermoelectric sensor, particularly in view of (1) Beliles's exemplary and non-limiting list of sensors 121–124 in Figure 1, and (2) event sensing involves updating current conditions that include *temperature* as noted in paragraph 52. *See* Final Act. 21–22; Ans. 8 (citing Beliles ¶¶ 16, 28, 52; Fig. 1).

Therefore, we are not persuaded that the Examiner erred in rejecting claim 5.

*Claim 8*

We also sustain the Examiner's rejection of claim 8 reciting, in pertinent part, capturing the human voice data by multiple microphones in the client device. Despite Appellant's arguments to the contrary (Appeal Br. 63–64; Reply Br. 5–6), we see no error in the Examiner's reliance on Buck (Final Act. 23) for at least suggesting the recited limitations, particularly in view of Buck's speech recognition system interfacing with an array of directional microphones in paragraph 31.

Given this teaching, we see no reason why directional microphones could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, detect sound in the direction of the speaker to detect speech, thus minimizing or attenuating detected sounds from other directions that are unrelated to speech. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 8.

*Claim 9*

For reasons similar to those made regarding claim 8, we also sustain the Examiner's rejection of claim 9 reciting that the multiple microphones are arranged as a directional microphone array operative to estimate a (1) number; (2) magnitude; (3) frequency; (4) Direction-of-Arrival; (5) distance; or (6) speed of a phenomenon impinging on the array. *See* Final Act. 23; Ans. 9 (citing Buck ¶ 31). Despite Appellant's arguments to the contrary (Appeal Br. 64–65; Reply Br. 5–6), we see no reason why directional microphones, such as those in Buck's paragraph 31, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, detect sound in the direction of the speaker to detect speech, thus minimizing or attenuating detected sounds from other directions that are unrelated to speech. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 9.

*Claims 11 and 12*

We also sustain the Examiner's rejection of claim 11 reciting, in pertinent part, the client device *or* controlled device are addressable in the wireless network or the Internet using an address stored in a volatile or non-volatile memory of the respective device for uniquely identifying the

respective device in the network. Our emphasis on the term "or" above underscores that only one of the recited addressable devices need be taught or suggested by the prior art to satisfy the claim.

A key aspect of the Examiner's rejection is that communication between devices is via data packets exchanged over a network using the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol. *See* Final Act. 24; Ans. 9–10. Notably, the Examiner also finds that network communication process 244 is used by network device 200 to communicate information packets and frames among *other* network devices. Ans. 9–10; Beliles ¶ 33.

Given this functionality, we see no error in the Examiner's conclusion that it would have been obvious for the client or controlled devices to be addressable to receive data packets under Beliles's TCP/IP scheme as the Examiner proposes even assuming, without deciding, that it was known to address ports connected to those devices, such as telephone connections in a dial-up environment as Appellant contends (Appeal Br. 65). In short, addressing the client or controlled devices themselves to receive data packets would have been at least an obvious variation in light of Beliles's network-based data communication functionality. *Accord* Bd. Dec. 43–44 (concluding that providing addressable devices in connection with the Beliles/Abe system would, among other things, facilitate identifying and communicating with those devices over a network). Nor has Appellant shown that addressing the client and controlled devices would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans. *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

Because it would have been obvious for Beliles's client and controlled devices to be addressable as noted above, using an address stored in those devices for that purpose would have likewise been obvious as the Examiner indicates. *See* Final Act. 24; Ans. 9–10. We reach this conclusion noting the network devices' memory 240 which, as shown in Figure 2, stores data associated with *network communication* process 244 that, notably, communicates packets and frames of information among network devices. *See* Beliles ¶¶ 31–33. Even assuming, without deciding, that Beliles does not specify the content of this memory explicitly as Appellant contends (Appeal Br. 65), Beliles's Figure 2 nonetheless shows the box for memory 240 encompassing, among other things, network communication process 244—a process that exchanges data between addressed devices under the TCP/IP protocol as noted previously. Beliles, then, at least suggests storing addresses associated with this network communication process in at least memory 240.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 11, and claim 12 not argued separately with particularity.

*Claim 13*

We also sustain the Examiner's rejection of claim 13 reciting a Wireless Personal Area Network (WPAN) is (1) according to, or based on, Bluetooth™ or Institute of Electrical and Electronics Engineers (IEEE) 802.15.1-2005 standards, *or* (2) a wireless control network that is according to, or based on, Zigbee™, IEEE 802.15.4-2003, or Z-Wave™ standards. Our emphasis on the term "or" underscores that only one of the recited

WPAN aspects enumerated above need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 66; Reply Br. 6), we see no error in the Examiner's reliance on Buck (Final Act. 25; Ans. 10) for at least suggesting the recited limitations, particularly in view of Buck's speech recognition system interfacing with a network using wireless protocols, where the speech recognition controller is compliant with, among other protocols, Bluetooth™ and Zigbee™ in paragraph 52.

Given this teaching, we see no reason why a WPAN could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data regarding recognized speech wirelessly between devices using standard protocols. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 13.

*Claim 14*

We also sustain the Examiner's rejection of claim 14 reciting the wireless network is a Wireless Local Area Network (WLAN) that is according to, or based on, the recited IEEE standards. Although the Examiner's rejection incorrectly quotes claim 13 as Appellant indicates (Appeal Br. 66), we nonetheless deem this error harmless, for the Examiner's other findings in the rejection and the Answer are nonetheless commensurate with claim 14's limitations that recite a WLAN. *See* Final Act. 25; Ans. 10 (citing Beliles ¶ 27 and Figure 1 for teaching a LAN). We

see no harmful error in these findings, for Beliles notes in paragraph 27 that network cloud 110 can not only be wireless, but also a LAN.

Given this teaching, we see no reason why a WLAN could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data wirelessly between devices within a local area using standard protocols. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Appellant's contention that the Examiner's rejection of the parent claim is based on another reference and, therefore, Beliles purportedly cannot be used to teach the recited feature in a dependent claim (Reply Br. 6) is unavailing, for the Examiner relies on Beliles for teaching the recited wireless network in rejecting claim 1 from which claim 14 depends. *See* Final Act. 17 (finding that Beliles discloses a method for use with a client device in a building communicating over a *wireless* network); Ans. 7 (mapping Beliles's computer network 100 to the recited wireless network). And to the extent that Appellant contends that the Examiner's reliance on Beliles in rejecting claim 14 somehow conflicts with the Examiner's reliance on Buck in connection with the rejection of independent claim 1 (*see* Appeal Br. 66–67; Reply Br. 6), we disagree.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 14.

*Claim 15*

We also sustain the Examiner's rejection of claim 15 reciting the wireless network uses a wireless communication over a licensed *or*

unlicensed radio frequency (RF) band, that is an Industrial, Scientific and Medical (ISM) radio band. Our emphasis on the term "or" underscores that only one of the recited RF bands need be taught or suggested by the prior art to satisfy the claim.

Although the Examiner's indication in the rejection that claim 15 "does not teach or further define over the limitation in claim 13" is puzzling given the claims' different limitations as Appellant indicates (Appeal Br. 67–68), we nonetheless deem this error harmless, for the Examiner clarifies the rejection on page 10 of the Answer by citing Buck's wireless networks in paragraphs 51 and 52 that include, among other things, a Zigbee™ wireless network that the Examiner finds uses an unlicensed RF band as claimed—a finding that is undisputed. *See* Reply Br. 6 (acknowledging that Buck may disclose the recited feature).

Given this teaching, we see no reason why a wireless network using an unlicensed RF band, such as that disclosed in Buck's paragraphs 51 and 52, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data wirelessly between devices within a local area using conventional RF bands designated for that purpose. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 68), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a

petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 15.

*Claim 16*

We also sustain the Examiner's rejection of claim 16 reciting, in pertinent part, that the wireless network is a cellular telephone network that is either a Third *or* Fourth Generation network, each of which uses one of the recited alternative systems or protocols associated with those respective networks. Our emphasis on the term "or" underscores that only one of the recited networks need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 68–69; Reply Br. 7), we see no error in the Examiner's reliance on Buck (Final Act. 26; Ans. 10–11) for at least suggesting the recited limitations, particularly in view of Buck's speech recognition system interfacing with a network using *cellular* or wireless protocols or *cellular telephones* in paragraph 52.

Given this teaching, we see no error in the Examiner's conclusion that it would have been obvious to provide one of the recited cellular telephone networks in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data wirelessly between devices using known cellular telephone networks and associated data transmission schemes. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 16.

*Claim 17*

We also sustain the Examiner's rejection of claim 17 reciting that the client device *or* the controlled device is integrated in, part of, *or* entirely included in, an appliance. Our emphasis on the term "or" underscores that (1) only one of the recited devices, and (2) only one of the recited orientations with respect to the appliance need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 69–72; Reply Br. 7), we see no error in the Examiner's reliance on Abe's paragraph 34 (Final Act. 27; Ans. 11–12) for at least suggesting the recited limitations,

particularly since an appliance, such as air conditioner 52, is one of the devices to be controlled as shown in Figure 1. This functionality suggests that the controlled device is at least part of that appliance as claimed.

Given this teaching, we see no reason why the controlled device could not be at least part of an appliance in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, control automatically appliances that are commonly used in homes and offices, such as air conditioners, thus precluding the need to manually control those appliances. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 17.

*Claim 18*

We also sustain the Examiner's rejection of claim 18 reciting that the appliance's primary functionality is associated with food storage, handling, *or* preparation. Our emphasis on the term "or" underscores that only one of the recited functionalities need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 72; Reply Br. 7), we see no error in the Examiner's reliance on Abe (Final Act. 27; Ans. 11) for at least suggesting the recited limitations, particularly since air conditioner 52 is one of the devices to be controlled as shown in Figure 1.

Given this teaching, we see no reason why an appliance in the Beliles/Buck/Abe system, such as Abe's air conditioner 52, would not be at least *associated with* the recited functionalities as the Examiner proposes to,

among other things, use the air conditioner appliance in connection with storing or handling food by keeping food cooler to avoid spoilage. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 16.

*Claims 19–24*

We also sustain the Examiner's rejection of claims 19–24 reciting (1) various types of appliances and associated functionalities including heating food (claim 19), environmental control (claim 21), temperature control (claim 22), and cleaning (claim 23); and (2) various other types of appliances in claims 20 and 24.

Although the Examiner's indication in the rejection that each of claims 19 to 24 "does not teach or further define over the limitation in claim 17" is puzzling given the claims' different limitations as Appellant indicates (Appeal Br. 72–73), we nonetheless deem this error harmless, for the Examiner clarifies the rejection on pages 11 and 12 of the Answer by finding that the network-connected home appliances in Abe's paragraph 38 can include the recited appliances.

Despite Appellant's arguments to the contrary (Appeal Br. 72–73; Reply Br. 7–8), we see no error in the Examiner's reliance on Abe's paragraph 38 and Figure 1 (Ans. 11–12) for at least suggesting the recited limitations, particularly since air conditioner 52—a home appliance—is just one of the devices to be controlled as shown in Figure 1. Given Abe's exemplary and non-limiting reference to the home network connecting



Amazon EX1004 Page 382

*various types* of sensors *and devices* installed within a home, we see no error in the Examiner's finding that these various types of devices could include the devices and functionalities recited in claims 19 to 24 and are, therefore, obvious variations. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 73), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Therefore, we are not persuaded that the Examiner erred in rejecting claims 19–24.

*Claim 25*

We also sustain the Examiner's rejection of claim 25 reciting that the actuator is an electric light source that emits visible *or* non-visible light for illumination or indication, where the non-visible light is infrared, ultraviolet, X-rays, or gamma rays. Our emphasis on the term "or" underscores that only one of the recited light types need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 73–75; Reply Br. 8–9),[4] we see no error in the Examiner's reliance on Buck (Final Act. 28; Ans. 12) for at least suggesting the recited limitations. Buck's speech recognition and control process interfaces with, among other things, in-vehicle devices that, through actuators, adjust electronic elements and devices—elements that reasonably include visible light sources, such as headlights or cabin lights as the Examiner indicates. *See* Final Act. 28; Ans. 25 (citing Buck ¶ 32). We reach this conclusion noting that Buck's paragraph 20 states, quite broadly, that the system can adjust or activate *any* vehicle-related system that includes not only a seating system, mirror controls, or entertainment systems, but also *any* in-vehicle or vehicle-related system.

[4] Appellant's assertion that the Examiner's rejection of claim 25 is based on Abe's paragraph 32 (Appeal Br. 73) is incorrect. Rather, the Examiner cites Buck's paragraph 32 to reject claim 25. *See* Final Act. 28.

Given these teachings that are replete with broad and non-limiting terms, and leaving aside the fact that illuminance is sensed in Abe's Figure 3, we see no reason why an electric visible light source actuator, such as an actuator for vehicle headlights or cabin lights, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, control the visible light source automatically via voice commands. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 25.

*Claims 26–30*

We also sustain the Examiner's rejection of claims 26–30 reciting (1) the electric light source comprises one of various types of alternative light sources (claim 26); (2) a motion actuator (claim 27); and (3) a sounder (claims 28–30).

Although the Examiner's indication in the rejection that each of claims 26 to 30 "does not teach or further define over the limitation in claim 25" (Final Act. 28) is puzzling given the claims' different limitations as Appellant indicates (Appeal Br. 76), we nonetheless deem this error harmless, for the Examiner clarifies the rejection on page 12 of the Answer by finding that Buck's paragraph 32 teaches various actuators that include headlights, sounders, and other actuators that enable mechanical adjustments.

Despite Appellant's arguments to the contrary (Appeal Br. 76; Reply Br. 9), we see no error in the Examiner's reliance on Buck's paragraph 32



Amazon EX1004 Page 385

(Ans. 12) for at least suggesting the recited limitations, particularly since Buck's speech recognition and control process interfaces with, among other things, in-vehicle devices that, through actuators, adjust electronic and mechanical elements and devices—elements that reasonably include visible light sources, motion actuators, and sounders. We reach this conclusion noting that Buck's paragraph 20 states, quite broadly, that the system can adjust or activate *any* vehicle-related system that includes not only a seating system, mirror controls, or entertainment systems, but also *any* in-vehicle or vehicle-related system.

Given these teachings that are replete with broad and non-limiting terms, we see no reason why actuators, such as the recited electric visible light source, motion actuator, and sounder, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, control those sources automatically via voice commands. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 76), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that

should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Therefore, we are not persuaded that the Examiner erred in rejecting claims 26–30.

## CONCLUSION

In summary:

| Claims Rejected | 35 U.S.C. § | Reference(s) /Basis | Affirmed | Reversed |
|---|---|---|---|---|
| 1–30 | 103 | Beliles, Buck, Abe | 1–30 | |

## TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

## AFFIRMED

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The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* YEHUDA BINDER and BENJAMIN MAYTAL

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Appeal 2019-002056
Application 15/657,163
Technology Center 2400

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Before JOHN A. JEFFERY, JUSTIN BUSCH, and
LINZY T. McCARTNEY, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Under 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–30. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as May Patents Ltd. Appeal Br. 1.

## STATEMENT OF THE CASE

Appellant's invention is a voice control system used in connection with a building, where the system uses a server implementing gateway or control functionalities. *See* Abstract; Spec. 1, 178–80; Fig. 19. Controller functionality can be integrated in a server external to the building. *See* Spec. 162–63; Figs. 15–15a. Claim 1 is illustrative:

> 1. A method for operating an actuator in a controlled device in response to captured human voice data, for use with a client device in a building communicating over a wireless network and an Internet-connected server device external to the building, the method comprising:
>
> capturing, by a microphone in the client device, the human voice data;
>
> sending to the server, by the client device via the wireless network, the captured human voice data;
>
> receiving, by the server over the Internet, the captured human voice data;
>
> processing, by the server, the captured human voice data;
>
> responsive to the processing, sending a message, by the server to the controlled device over the Internet;
>
> receiving, by the controlled device via the wireless network, the message; and
>
> operating the actuator in the controlled device in response to the received message.

## RELATED APPEALS

Appellant informs us of three related appeals in copending applications (1) 13/733,634; (2) 15/361,434; and (3) 15/716,881. Appeal Br. 2. One of these appeals, namely the appeal in the '634 application, has been decided. *See Ex parte Binder*, Appeal 2018-007694 (PTAB Mar. 2, 2020)

("Bd. Dec."). In that appeal, among other things, we affirmed the Examiner's obviousness rejections that cited two of the three references at issue here, namely Beliles and Abe cited below. *See* Bd. Dec. 32–54.

## THE REJECTION[2]

The Examiner rejected claims 1–30 under 35 U.S.C. § 103 as unpatentable over Beliles (US 2007/0283005 A1; published Dec. 6, 2007), Buck (US 2009/0089065 A1; published Apr. 2, 2009), and Abe (US 2012/0253480 A1; published Oct. 4, 2012). Final Act. 17–28.[3]

## FINDINGS, CONCLUSIONS, AND CONTENTIONS

Regarding independent claim 1, the Examiner finds that Beliles uses a client device in a building communicating over a wireless network and an Internet-connected server device external to the building. Final Act. 17. Although the Examiner acknowledges that Beliles does not (1) capture human voice data by a microphone in the client device; (2) operate an actuator in a controlled device responsive to the captured voice data; and (3) send the voice data to the server via the wireless network, where the server receives the voice data over the Internet, the Examiner cites Buck as teaching these features. Final Act. 18–19. The Examiner also acknowledges that the Beliles/Buck system does not (1) process the captured voice data;

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[2] Because the Examiner withdrew rejections under §§ 101 and 112 (Ans. 3–4), those rejections are not before us.

[3] Throughout this opinion, we refer to (1) the Final Office Action mailed September 4, 2018 ("Final Act."); (2) the Appeal Brief filed October 3, 2018 ("Appeal Br."); (3) the Examiner's Answer mailed January 4, 2019 ("Ans."); and (4) the Reply Brief filed January 13, 2019 ("Reply Br.").

(2) send a message to the controlled device that is received by the controlled device; and (3) operate the actuator in the controlled device responsive to the received message, but cites Abe for teaching these features in concluding that the claim would have been obvious. Final Act. 19–20.

Appellant argues that the Examiner improperly combined the cited references. Appeal Br. 45–58; Reply Br. 2–5. According to Appellant, not only is the Examiner's proposed combination unclear, Beliles and Buck are non-analogous, and adding voice processing capabilities to Beliles as the Examiner proposes changes Beliles's principle of operation. Appeal Br. 45–49. Appellant further contends that the Examiner's articulated rationale to combine the references is improper because (1) the primary reference, Beliles, already has the capabilities for which Abe was cited; (2) it is unclear why these two references are analogous to each other; (3) the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in the Examiner's earlier restriction requirement; and (4) the Examiner picks and chooses subject matter from different embodiments in Abe to arrive at the claimed invention. Appeal Br. 53–58; Reply Br. 3–5. Appellant adds that Buck does not teach the voice data sending and receiving steps, and Beliles does not teach the recited Internet-connected server external to a building and wireless network. Appeal Br. 58–60; Reply Br. 5. Appellant argues various other recited limitations summarized below.

## ISSUES

Under § 103, has the Examiner erred by finding that Beliles, Buck, and Abe collectively would have taught or suggested:

(1) operating an actuator in a controlled device responsive to captured human voice data, where the method is used with a client device in a building communicating over a wireless network and an Internet-connected server device external to the building, where the client device sends the voice data to the server via the wireless network, and the server receives that data over the Internet as recited in claim 1?

(2) the particular limitations recited in dependent claims 2–5, 8, 9, 11, and 13–30?

II. Is the Examiner's proposed combination of the cited references supported by articulated reasoning with some rational underpinning to justify the Examiner's obviousness conclusion?

## ANALYSIS

### *Claims 1, 6, 7, and 10*

On this record, we are not persuaded of error in the Examiner's obviousness rejection of independent claim 1. As shown in Beliles's Figure 1 reproduced below, Beliles discloses a computer network 100 in a building comprising, among other things, fire sensor 123 connected to sensor translator 132 that is, in turn, connected to a network device (router 152) that is connected to network cloud 110 to which fire suppression device 161, door locks 162, and other physical control devices are connected. *See* Beliles ¶¶ 15–17, 27–29, 34.

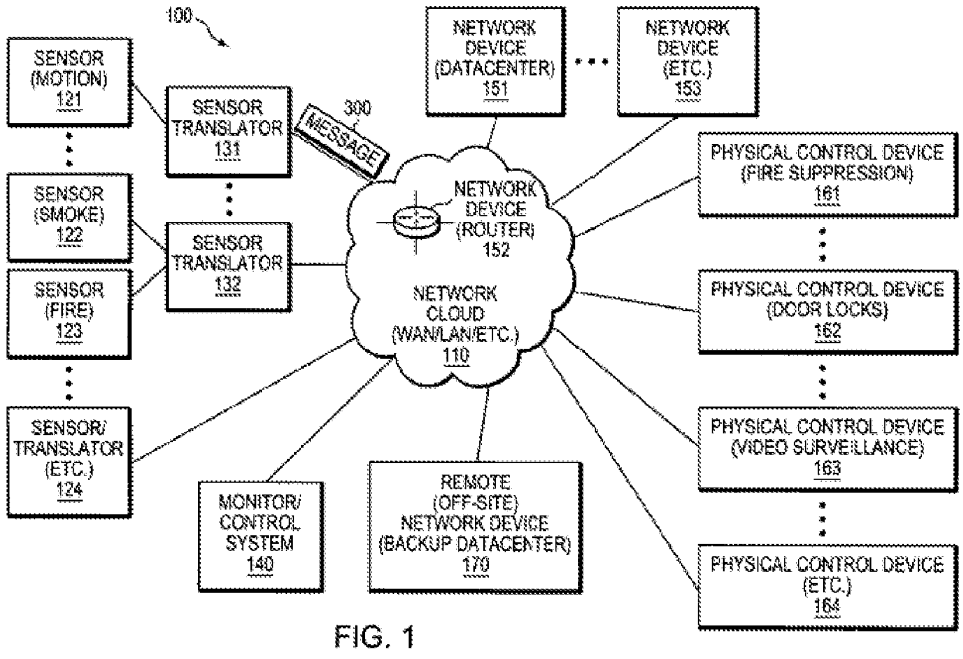



FIG. 1

**Beliles's computer network 100 in Figure 1**

As shown above, network cloud 110 is connected to various network devices 151–153 that include data centers, routers, personal computers, etc. Beliles ¶ 29. These network devices, detailed in Beliles's Figure 2 and paragraphs 31 to 33, are "client devices" at least with respect to the external monitoring/control system 140 that corresponds to the recited Internet-connected server device consistent with the Examiner's mapping. *See* Final Act. 17; Ans. 5–7 (citing Beliles ¶¶ 15–16, 34).

Although physical events, such as detected fires, can be conveyed from the sensors to monitoring/control system 140 using proprietary signaling systems, such as an internal fire alarm system, these events can also be sent over the Internet. Beliles ¶ 34. To the extent that Appellant contends that this Internet-based functionality must be limited to an internal

network within the building, and somehow cannot involve an external network (*see* Reply Br. 59–60), we disagree. Not only is there no persuasive evidence on this record to substantiate Appellant's contention, ordinarily skilled artisans would understand that external networks are the very essence of the Internet and the *World Wide* Web. Therefore, Beliles at least suggests an external network.

Nor does Appellant persuasively rebut the Examiner's reliance on Beliles's paragraph 27 for teaching communicating over a wireless network, particularly since Beliles teaches in that paragraph that network 100 may be configured as a wireless network. We likewise see no error in the Examiner's reliance on Beliles's monitoring/control system 140 for teaching the recited Internet-connected server device. *See* Ans. 5–7 (citing Beliles ¶ 34).

We also see no error in the Examiner's reliance on Buck for at least suggesting (1) capturing human voice data by a microphone in a client device, namely a vehicle; and (2) sending the voice data to the server via a wireless network, where the server receives the voice data over the Internet. Final Act. 18–19; Ans. 7. As shown in Buck's Figure 4, the system converts spoken words into commands using speech recognition device 402 connected to vehicle buses 408 and actuator 406. Buck ¶ 28. Notably, the buses may be *wireless* and convey control and/or actuator signals to *remote (e.g., out-of-vehicle)* destinations. *Id.*

Given this functionality, Buck at least suggests sending captured voice data wirelessly to a remote destination external to the vehicle. Although Buck does not specify these remote destinations that receive the captured voice data, we nonetheless see no reason why these destinations cannot

include Internet-connected servers as the Examiner indicates. *See* Final Act. 18; Ans. 7. To the extent Appellant contends otherwise, there is no persuasive evidence on this record to substantiate such a contention.

Given the Beliles/Buck system's Internet-based functionality, we see no error in the Examiner's reliance on Abe merely to show that providing an Internet-based control apparatus 101 that is external to a building is known in the art as shown in Abe's Figure 15, and that providing such external control functionality in connection with the Beliles/Buck system would have been at least an obvious variation. *See* Final Act. 19–20; Ans. 6; *see also* Abe ¶ 93. That (1) detected events associated with fires can be conveyed *over the Internet* from the sensors to monitoring/control system 140 as noted in Beliles's paragraph 34, and (2) captured voice data is sent *wirelessly* to a *remote* destination in Buck's paragraph 28 only bolsters the Examiner's findings and conclusions in this regard.

Nor does Appellant persuasively rebut the Examiner's mapping of Abe's control apparatus 101 to a control server (*see* Ans. 6)—a mapping that we find reasonable on this record given the control apparatus's external control capabilities for in-building networked sensor-based systems via Internet 300 in Figure 15. *See* Abe ¶¶ 93–96. As the Examiner indicates, Abe's in-building systems in Figure 15 include image display device 51 and air conditioner 52 that are controlled devices with actuators. *See* Ans. 6; Abe ¶ 95.

Given this functionality considered in light of the other cited references' teachings, we see no error in the Examiner's reliance on Abe for teaching (1) processing captured voice data received from the Beliles/Buck system; (2) sending a message to the controlled device over the Internet,

where the message is received by the controlled device via a wireless network; and (3) operating an actuator in the controlled device responsive to the received message. *See* Final Act. 19–20; Ans. 6.

Appellant's arguments regarding the alleged individual shortcomings of Beliles, Buck, and Abe (Appeal Br. 58–60) are unavailing where, as here, the rejection is based on the cited references' collective teachings. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Nor are we persuaded of error in the Examiner's rationale for combining Beliles, Buck, and Abe despite Appellant's arguments to the contrary (*see* Appeal Br. 45–58; Reply Br. 2–5). First, we see no error in the Examiner's articulated rationale for combining Beliles and Buck, namely to provide hands-free actuator control and operation using voice commands in connection with Beliles's system. *See* Final Act. 18–19; Ans. 4–5. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007).

To be sure, if the Examiner's proposed modification renders the prior art unsatisfactory for its intended purpose, the Examiner has failed to make a prima facie case of obviousness. *See In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). But that is not the case here. Providing voice-based control, such as that in Buck, in connection with Beliles's system as the Examiner proposes would not render Beliles's system unsuitable for its intended purpose as Appellant seems to suggest (*see* Appeal Br. 48–49), but would merely provide *additional* voice-based control capabilities to at least augment Beliles's sensor-based control system—an enhancement yielding a predictable result. *Accord* Ans. 4 (noting that combining Buck with Beliles

*improves* Beliles's system by *adding* human speech recognition and actuator voice control).

We see no error in the Examiner's proposed combination despite the fact that Buck's voice control system is used in connection with a vehicle. As noted previously, Buck's *wireless* buses 408 in Figure 4 convey control and/or actuator signals to *remote (e.g., out-of-vehicle)* destinations. Buck ¶ 28. Because Buck at least suggests sending captured voice data wirelessly to a remote destination external to the vehicle for control purposes, Buck is at least reasonably pertinent to Appellant's problem of sending captured data to a remote location for processing and control and, therefore, is analogous art. *See In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (noting that prior art is analogous if it is (1) from the same field of endeavor regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved).

We reach this conclusion despite Beliles's and Buck's different patent classifications as Appellant indicates. *See* Appeal Br. 46–47. Although these diverse classifications can constitute *some* evidence of "non-analogy," this evidence is far outweighed by the references' structural and functional similarities that render them analogous art. *See In re Ellis*, 476 F.2d 1370, 1372 (CCPA 1973) (noting that (1) diverse patent office classification of prior art references is some evidence of "non-analogy," and (2) cross-references in official search notes is some evidence of "analogy," the similarities and differences in structure and function of the references' disclosed inventions carry far greater weight).

Appellant's reliance on a non-precedential Board decision that, according to Appellant, held that a vehicle-based control was non-analogous

to a similar function in a building (Appeal Br. 46), is unavailing. Not only do the facts in that case differ from those at issue here, as a non-precedential decision, it is not binding on this panel in any event. *See* PTAB Standard Operating Procedure 2 (Rev. 10) ("SOP 2") § I(B), https://www.uspto.gov/sites/default/files/documents/SOP2%20R10%20FINAL.pdf.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 47), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Nor are we persuaded of error in the Examiner's rationale for combining Abe with the Beliles/Buck system despite Appellant's arguments to the contrary (*see* Appeal Br. 53–58; Reply Br. 3–5). A key aspect of the Examiner's rationale relies on the functionality of Abe's control apparatus in Figures 15 and 16. *See* Ans. 6. Given this functionality, the Examiner concludes that it would have been obvious to implement an internet-connected control server that (1) acquires and processes information, and (2) sends associated control commands over the Internet to a controlled device and actuator when an abnormality occurs. *See* Final Act. 20; Ans. 6.

We see no error in these findings and conclusions. Although the Examiner's citation to paragraphs 50 and 51 on page 19 of the Final Office Action pertains to Abe's first disclosed embodiment, we nevertheless see no reason why this control apparatus functionality could not also be provided in conjunction with that of Abe's second embodiment in Figure 15 as the Examiner proposes despite Appellant's arguments to the contrary (Appeal Br. 55). First, although Figure 15's embodiment uses a control apparatus 101 instead of control apparatus 100 in Figure 1, the two respective control apparatuses are nonetheless strikingly similar in many respects. As shown in Abe's Figures 2 and 16, control apparatus 101 has the same sections 11–15 as control apparatus 100, including control rule accumulation section 14. Given this striking similarity, the Examiner's reliance on Abe's first and second embodiments is reasonable, at least regarding the particular functionality from these embodiments on which the Examiner relies. We reach this conclusion even assuming, without deciding, that control apparatus 100 in Abe's Figure 2 is inside a building, unlike control apparatus 101 in Figure 15 as Appellant contends (Appeal Br. 55). Despite these

purported differences, the control apparatues' structure and control functionalities are nonetheless strikingly similar as noted above and we, therefore, see no error in the Examiner's reliance on teachings from these embodiments in the rejection.

Second, it is well settled that "[c]ombining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness." *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009). That is the case here. In short, in light of Abe, the Examiner's proposed enhancement to the Beliles/Buck system is not based on impermissible hindsight as Appellant alleges (Reply Br. 21), but rather uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Appellant's contention that it is ostensibly unclear why Beliles and Abe are analogous *to each other* (Appeal Br. 54) is unavailing. Prior art is analogous if it is (1) from the same field of endeavor as the invention, regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved. *Bigio*, 381 F.3d at 1325. The analogous art test, then, does not ask whether the prior art references are analogous *to each other* as Appellant seems to suggest (*see* Appeal Br. 54), but rather asks whether the references are analogous to the claimed subject matter. *See id.; see also In re Kahn*, 441 F.3d 977, 986-87 (Fed. Cir. 2006). Because Beliles and Abe both involve environment control networks as the Examiner indicates (Ans. 6), the references are not only in the same field of endeavor as Appellant's invention, but they are also reasonably pertinent to Appellant's problem in that regard.

Lastly, we find unpersuasive Appellant's contention that the Examiner's combining Beliles and Abe is improper because both systems are ostensibly self-contained and independently operate effectively. *See* Appeal Br. 57–58. To be sure, the court in *Kinetic Concepts* noted that because two cited prior art references independently accomplished similar functions, namely draining fluids, each device independently operated effectively such that ordinarily skilled artisans seeking to create a better device to drain fluids from a wound would have no reason to combine the features of both devices into a single device. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1369 (Fed. Cir. 2012).

Not only are the facts in *Kinetic Concepts* regarding draining fluids from a wound entirely different from those at issue here, we also note that familiar items may have obvious uses beyond their primary purposes, and often ordinarily skilled artisans can fit multiple references' teachings together like puzzle pieces, as is the case here. *See KSR*, 550 U.S. at 420. On this record, then, the Examiner's proposed enhancement to the Beliles/Buck system, namely (1) processing captured voice data received from the Beliles/Buck system; (2) sending a message to the controlled device over the Internet, where the message is received by the controlled device via a wireless network; and (3) operating an actuator in the controlled device responsive to the received message (*see* Final Act. 19–20; Ans. 6) uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 6, 7, and 10 not argued separately with particularity.

*Claim 2*

We also sustain the Examiner's rejection of claim 2 reciting that the controlled device is part of, integrated with, *or* the same as, the client device. Our emphasis on the term "or" underscores that only one recited alternative need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 60–61), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 20; Ans. 7 (citing Buck ¶¶ 20, 31, 50).

To the extent that Appellant contends that the Examiner's findings regarding the limitations of claim 2 are inconsistent with claim 1 (*see* Appeal Br. 60), we disagree. In rejecting independent claim 1, the Examiner finds that Buck teaches, among other things, that a *client device* sends captured voice data to a server via a wireless network. *See* Final Act. 18. As Buck explains in paragraph 28, the vehicle's wireless buses convey control and/or actuator signals to *remote (e.g., out-of-vehicle)* destinations. Given this disclosure in light of the Examiner's findings, we see no reason why a vehicle and its data processing and transmission components cannot be a "client device" as claimed, particularly given the client-based voice data generated in Buck's vehicle that is sent to remote destinations which, as noted previously, include servers under the Examiner's interpretation. *See* Final Act. 18; Ans. 7.

In rejecting dependent claim 2, the Examiner finds that the controlled device, namely Buck's seating system, electronic entertainment, etc., is *part of* the client device, namely the vehicle. Final Act. 20 (citing Buck ¶ 20).

These findings not only satisfy the recited "part of" alternative noted above, they are also consistent with those made for independent claim 1.

In short, Appellant fails to persuasively rebut the Examiner's finding that Buck teaches a "controlled device," for example, a seating system, that is part of a "client device," namely a vehicle or related system. *See* Final Act. 18–19; Ans. 18.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 2.

*Claim 3*

We also sustain the Examiner's rejection of claim 3 reciting that the processing comprises performing a voice recognition algorithm for identifying the voice of a specific person. Despite Appellant's arguments to the contrary (Appeal Br. 61–62; Reply Br. 5), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 20; Ans. 7–8 (citing Buck ¶¶ 37–38; Abe, Fig. 16).

In short, Appellant does not persuasively rebut the Examiner's finding that Buck teaches the recited voice recognition algorithm, and that it would have been obvious to process that algorithm at a remote server, such as that disclosed by Abe. *See* Ans. 8. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417. Appellant's arguments regarding Buck's individual shortcomings in this regard (Appeal Br. 61–62) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 3.

*Claim 4*

We also sustain the Examiner's rejection of claim 4 reciting, in pertinent part, that (1) the client sends sensor data to the server via the wireless network, and (2) the server sends the message responsive to the sensor data. Despite Appellant's arguments to the contrary (Appeal Br. 62), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 21; Ans. 8 (citing Beliles ¶¶ 52, 54; Figs. 1, 6; Abe, Fig. 15). Appellant's arguments regarding Beliles's individual shortcomings in this regard (Appeal Br. 62) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 4.

*Claim 5*

We also sustain the Examiner's rejection of claim 5 reciting, in pertinent part, the sensor is (1) a thermoelectric sensor that responds to a temperature *or* to a temperature gradient of an object using conduction, convection, or radiation, *or* (2) a photoelectric sensor that responds to a visible or an invisible light or gamma rays. Our emphasis on the term "or" underscores that only one of the recited sensors need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 63), we see no error in the Examiner's reliance on Beliles for at least suggesting the recited thermoelectric sensor, particularly in view of (1) Beliles's exemplary and non-limiting list of sensors 121–124 in Figure 1, and (2) event sensing involves updating current conditions that include *temperature* as noted in paragraph 52. *See* Final Act. 21–22; Ans. 8 (citing Beliles ¶¶ 16, 28, 52; Fig. 1).

Therefore, we are not persuaded that the Examiner erred in rejecting claim 5.

*Claim 8*

We also sustain the Examiner's rejection of claim 8 reciting, in pertinent part, capturing the human voice data by multiple microphones in the client device. Despite Appellant's arguments to the contrary (Appeal Br. 63–64; Reply Br. 5–6), we see no error in the Examiner's reliance on Buck (Final Act. 23) for at least suggesting the recited limitations, particularly in view of Buck's speech recognition system interfacing with an array of directional microphones in paragraph 31.

Given this teaching, we see no reason why directional microphones could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, detect sound in the direction of the speaker to detect speech, thus minimizing or attenuating detected sounds from other directions that are unrelated to speech. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 8.

*Claim 9*

For reasons similar to those made regarding claim 8, we also sustain the Examiner's rejection of claim 9 reciting that the multiple microphones are arranged as a directional microphone array operative to estimate a (1) number; (2) magnitude; (3) frequency; (4) Direction-of-Arrival; (5) distance; or (6) speed of a phenomenon impinging on the array. *See* Final Act. 23; Ans. 9 (citing Buck ¶ 31). Despite Appellant's arguments to the contrary (Appeal Br. 64–65; Reply Br. 5–6), we see no reason why directional microphones, such as those in Buck's paragraph 31, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, detect sound in the direction of the speaker to detect speech, thus minimizing or attenuating detected sounds from other directions that are unrelated to speech. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 9.

*Claims 11 and 12*

We also sustain the Examiner's rejection of claim 11 reciting, in pertinent part, the client device *or* controlled device are addressable in the wireless network or the Internet using an address stored in a volatile or non-volatile memory of the respective device for uniquely identifying the

respective device in the network. Our emphasis on the term "or" above underscores that only one of the recited addressable devices need be taught or suggested by the prior art to satisfy the claim.

A key aspect of the Examiner's rejection is that communication between devices is via data packets exchanged over a network using the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol. *See* Final Act. 24; Ans. 9–10. Notably, the Examiner also finds that network communication process 244 is used by network device 200 to communicate information packets and frames among *other* network devices. Ans. 9–10; Beliles ¶ 33.

Given this functionality, we see no error in the Examiner's conclusion that it would have been obvious for the client or controlled devices to be addressable to receive data packets under Beliles's TCP/IP scheme as the Examiner proposes even assuming, without deciding, that it was known to address ports connected to those devices, such as telephone connections in a dial-up environment as Appellant contends (Appeal Br. 65). In short, addressing the client or controlled devices themselves to receive data packets would have been at least an obvious variation in light of Beliles's network-based data communication functionality. *Accord* Bd. Dec. 43–44 (concluding that providing addressable devices in connection with the Beliles/Abe system would, among other things, facilitate identifying and communicating with those devices over a network). Nor has Appellant shown that addressing the client and controlled devices would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans. *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

Because it would have been obvious for Beliles's client and controlled devices to be addressable as noted above, using an address stored in those devices for that purpose would have likewise been obvious as the Examiner indicates. *See* Final Act. 24; Ans. 9–10. We reach this conclusion noting the network devices' memory 240 which, as shown in Figure 2, stores data associated with *network communication* process 244 that, notably, communicates packets and frames of information among network devices. *See* Beliles ¶¶ 31–33. Even assuming, without deciding, that Beliles does not specify the content of this memory explicitly as Appellant contends (Appeal Br. 65), Beliles's Figure 2 nonetheless shows the box for memory 240 encompassing, among other things, network communication process 244—a process that exchanges data between addressed devices under the TCP/IP protocol as noted previously. Beliles, then, at least suggests storing addresses associated with this network communication process in at least memory 240.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 11, and claim 12 not argued separately with particularity.

*Claim 13*

We also sustain the Examiner's rejection of claim 13 reciting a Wireless Personal Area Network (WPAN) is (1) according to, or based on, Bluetooth™ or Institute of Electrical and Electronics Engineers (IEEE) 802.15.1-2005 standards, *or* (2) a wireless control network that is according to, or based on, Zigbee™, IEEE 802.15.4-2003, or Z-Wave™ standards. Our emphasis on the term "or" underscores that only one of the recited

WPAN aspects enumerated above need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 66; Reply Br. 6), we see no error in the Examiner's reliance on Buck (Final Act. 25; Ans. 10) for at least suggesting the recited limitations, particularly in view of Buck's speech recognition system interfacing with a network using wireless protocols, where the speech recognition controller is compliant with, among other protocols, Bluetooth™ and Zigbee™ in paragraph 52.

Given this teaching, we see no reason why a WPAN could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data regarding recognized speech wirelessly between devices using standard protocols. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 13.

*Claim 14*

We also sustain the Examiner's rejection of claim 14 reciting the wireless network is a Wireless Local Area Network (WLAN) that is according to, or based on, the recited IEEE standards. Although the Examiner's rejection incorrectly quotes claim 13 as Appellant indicates (Appeal Br. 66), we nonetheless deem this error harmless, for the Examiner's other findings in the rejection and the Answer are nonetheless commensurate with claim 14's limitations that recite a WLAN. *See* Final Act. 25; Ans. 10 (citing Beliles ¶ 27 and Figure 1 for teaching a LAN). We

see no harmful error in these findings, for Beliles notes in paragraph 27 that network cloud 110 can not only be wireless, but also a LAN.

Given this teaching, we see no reason why a WLAN could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data wirelessly between devices within a local area using standard protocols. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Appellant's contention that the Examiner's rejection of the parent claim is based on another reference and, therefore, Beliles purportedly cannot be used to teach the recited feature in a dependent claim (Reply Br. 6) is unavailing, for the Examiner relies on Beliles for teaching the recited wireless network in rejecting claim 1 from which claim 14 depends. *See* Final Act. 17 (finding that Beliles discloses a method for use with a client device in a building communicating over a *wireless* network); Ans. 7 (mapping Beliles's computer network 100 to the recited wireless network). And to the extent that Appellant contends that the Examiner's reliance on Beliles in rejecting claim 14 somehow conflicts with the Examiner's reliance on Buck in connection with the rejection of independent claim 1 (*see* Appeal Br. 66–67; Reply Br. 6), we disagree.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 14.

*Claim 15*

We also sustain the Examiner's rejection of claim 15 reciting the wireless network uses a wireless communication over a licensed *or*



Amazon EX1004 Page 411

unlicensed radio frequency (RF) band, that is an Industrial, Scientific and Medical (ISM) radio band. Our emphasis on the term "or" underscores that only one of the recited RF bands need be taught or suggested by the prior art to satisfy the claim.

Although the Examiner's indication in the rejection that claim 15 "does not teach or further define over the limitation in claim 13" is puzzling given the claims' different limitations as Appellant indicates (Appeal Br. 67–68), we nonetheless deem this error harmless, for the Examiner clarifies the rejection on page 10 of the Answer by citing Buck's wireless networks in paragraphs 51 and 52 that include, among other things, a Zigbee™ wireless network that the Examiner finds uses an unlicensed RF band as claimed—a finding that is undisputed. *See* Reply Br. 6 (acknowledging that Buck may disclose the recited feature).

Given this teaching, we see no reason why a wireless network using an unlicensed RF band, such as that disclosed in Buck's paragraphs 51 and 52, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data wirelessly between devices within a local area using conventional RF bands designated for that purpose. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 68), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a

petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 15.

*Claim 16*

We also sustain the Examiner's rejection of claim 16 reciting, in pertinent part, that the wireless network is a cellular telephone network that is either a Third *or* Fourth Generation network, each of which uses one of the recited alternative systems or protocols associated with those respective networks. Our emphasis on the term "or" underscores that only one of the recited networks need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 68–69; Reply Br. 7), we see no error in the Examiner's reliance on Buck (Final Act. 26; Ans. 10–11) for at least suggesting the recited limitations, particularly in view of Buck's speech recognition system interfacing with a network using *cellular* or wireless protocols or *cellular telephones* in paragraph 52.

Given this teaching, we see no error in the Examiner's conclusion that it would have been obvious to provide one of the recited cellular telephone networks in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data wirelessly between devices using known cellular telephone networks and associated data transmission schemes. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 16.

*Claim 17*

We also sustain the Examiner's rejection of claim 17 reciting that the client device *or* the controlled device is integrated in, part of, *or* entirely included in, an appliance. Our emphasis on the term "or" underscores that (1) only one of the recited devices, and (2) only one of the recited orientations with respect to the appliance need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 69–72; Reply Br. 7), we see no error in the Examiner's reliance on Abe's paragraph 34 (Final Act. 27; Ans. 11–12) for at least suggesting the recited limitations,

particularly since an appliance, such as air conditioner 52, is one of the devices to be controlled as shown in Figure 1. This functionality suggests that the controlled device is at least part of that appliance as claimed.

Given this teaching, we see no reason why the controlled device could not be at least part of an appliance in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, control automatically appliances that are commonly used in homes and offices, such as air conditioners, thus precluding the need to manually control those appliances. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 17.

*Claim 18*

We also sustain the Examiner's rejection of claim 18 reciting that the appliance's primary functionality is associated with food storage, handling, *or* preparation. Our emphasis on the term "or" underscores that only one of the recited functionalities need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 72; Reply Br. 7), we see no error in the Examiner's reliance on Abe (Final Act. 27; Ans. 11) for at least suggesting the recited limitations, particularly since air conditioner 52 is one of the devices to be controlled as shown in Figure 1.

Given this teaching, we see no reason why an appliance in the Beliles/Buck/Abe system, such as Abe's air conditioner 52, would not be at least *associated with* the recited functionalities as the Examiner proposes to,

among other things, use the air conditioner appliance in connection with storing or handling food by keeping food cooler to avoid spoilage. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 16.

*Claims 19–24*

We also sustain the Examiner's rejection of claims 19–24 reciting (1) various types of appliances and associated functionalities including heating food (claim 19), environmental control (claim 21), temperature control (claim 22), and cleaning (claim 23); and (2) various other types of appliances in claims 20 and 24.

Although the Examiner's indication in the rejection that each of claims 19 to 24 "does not teach or further define over the limitation in claim 17" is puzzling given the claims' different limitations as Appellant indicates (Appeal Br. 72–73), we nonetheless deem this error harmless, for the Examiner clarifies the rejection on pages 11 and 12 of the Answer by finding that the network-connected home appliances in Abe's paragraph 38 can include the recited appliances.

Despite Appellant's arguments to the contrary (Appeal Br. 72–73; Reply Br. 7–8), we see no error in the Examiner's reliance on Abe's paragraph 38 and Figure 1 (Ans. 11–12) for at least suggesting the recited limitations, particularly since air conditioner 52—a home appliance—is just one of the devices to be controlled as shown in Figure 1. Given Abe's exemplary and non-limiting reference to the home network connecting



Amazon EX1004 Page 416

*various types* of sensors *and devices* installed within a home, we see no error in the Examiner's finding that these various types of devices could include the devices and functionalities recited in claims 19 to 24 and are, therefore, obvious variations. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 73), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Therefore, we are not persuaded that the Examiner erred in rejecting claims 19–24.

*Claim 25*

We also sustain the Examiner's rejection of claim 25 reciting that the actuator is an electric light source that emits visible *or* non-visible light for illumination or indication, where the non-visible light is infrared, ultraviolet, X-rays, or gamma rays. Our emphasis on the term "or" underscores that only one of the recited light types need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 73–75; Reply Br. 8–9),[4] we see no error in the Examiner's reliance on Buck (Final Act. 28; Ans. 12) for at least suggesting the recited limitations. Buck's speech recognition and control process interfaces with, among other things, in-vehicle devices that, through actuators, adjust electronic elements and devices—elements that reasonably include visible light sources, such as headlights or cabin lights as the Examiner indicates. *See* Final Act. 28; Ans. 25 (citing Buck ¶ 32). We reach this conclusion noting that Buck's paragraph 20 states, quite broadly, that the system can adjust or activate *any* vehicle-related system that includes not only a seating system, mirror controls, or entertainment systems, but also *any* in-vehicle or vehicle-related system.

[4] Appellant's assertion that the Examiner's rejection of claim 25 is based on Abe's paragraph 32 (Appeal Br. 73) is incorrect. Rather, the Examiner cites Buck's paragraph 32 to reject claim 25. *See* Final Act. 28.

Given these teachings that are replete with broad and non-limiting terms, and leaving aside the fact that illuminance is sensed in Abe's Figure 3, we see no reason why an electric visible light source actuator, such as an actuator for vehicle headlights or cabin lights, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, control the visible light source automatically via voice commands. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 25.

*Claims 26–30*

We also sustain the Examiner's rejection of claims 26–30 reciting (1) the electric light source comprises one of various types of alternative light sources (claim 26); (2) a motion actuator (claim 27); and (3) a sounder (claims 28–30).

Although the Examiner's indication in the rejection that each of claims 26 to 30 "does not teach or further define over the limitation in claim 25" (Final Act. 28) is puzzling given the claims' different limitations as Appellant indicates (Appeal Br. 76), we nonetheless deem this error harmless, for the Examiner clarifies the rejection on page 12 of the Answer by finding that Buck's paragraph 32 teaches various actuators that include headlights, sounders, and other actuators that enable mechanical adjustments.

Despite Appellant's arguments to the contrary (Appeal Br. 76; Reply Br. 9), we see no error in the Examiner's reliance on Buck's paragraph 32

(Ans. 12) for at least suggesting the recited limitations, particularly since Buck's speech recognition and control process interfaces with, among other things, in-vehicle devices that, through actuators, adjust electronic and mechanical elements and devices—elements that reasonably include visible light sources, motion actuators, and sounders. We reach this conclusion noting that Buck's paragraph 20 states, quite broadly, that the system can adjust or activate *any* vehicle-related system that includes not only a seating system, mirror controls, or entertainment systems, but also *any* in-vehicle or vehicle-related system.

Given these teachings that are replete with broad and non-limiting terms, we see no reason why actuators, such as the recited electric visible light source, motion actuator, and sounder, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, control those sources automatically via voice commands. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 76), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that

should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Therefore, we are not persuaded that the Examiner erred in rejecting claims 26–30.

## CONCLUSION

In summary:

| Claims Rejected | 35 U.S.C. § | Reference(s) /Basis | Affirmed | Reversed |
|---|---|---|---|---|
| 1–30 | 103 | Beliles, Buck, Abe | 1–30 | |

## TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

## AFFIRMED

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The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* YEHUDA BINDER and BENJAMIN MAYTAL

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Appeal 2019-002056
Application 15/657,163
Technology Center 2400

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Before JOHN A. JEFFERY, JUSTIN BUSCH, and
LINZY T. McCARTNEY, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Under 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–30. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as May Patents Ltd. Appeal Br. 1.

## STATEMENT OF THE CASE

Appellant's invention is a voice control system used in connection with a building, where the system uses a server implementing gateway or control functionalities. *See* Abstract; Spec. 1, 178–80; Fig. 19. Controller functionality can be integrated in a server external to the building. *See* Spec. 162–63; Figs. 15–15a. Claim 1 is illustrative:

> 1. A method for operating an actuator in a controlled device in response to captured human voice data, for use with a client device in a building communicating over a wireless network and an Internet-connected server device external to the building, the method comprising:
>
> capturing, by a microphone in the client device, the human voice data;
>
> sending to the server, by the client device via the wireless network, the captured human voice data;
>
> receiving, by the server over the Internet, the captured human voice data;
>
> processing, by the server, the captured human voice data;
>
> responsive to the processing, sending a message, by the server to the controlled device over the Internet;
>
> receiving, by the controlled device via the wireless network, the message; and
>
> operating the actuator in the controlled device in response to the received message.

## RELATED APPEALS

Appellant informs us of three related appeals in copending applications (1) 13/733,634; (2) 15/361,434; and (3) 15/716,881. Appeal Br. 2. One of these appeals, namely the appeal in the '634 application, has been decided. *See Ex parte Binder*, Appeal 2018-007694 (PTAB Mar. 2, 2020)

("Bd. Dec."). In that appeal, among other things, we affirmed the Examiner's obviousness rejections that cited two of the three references at issue here, namely Beliles and Abe cited below. *See* Bd. Dec. 32–54.

## THE REJECTION[2]

The Examiner rejected claims 1–30 under 35 U.S.C. § 103 as unpatentable over Beliles (US 2007/0283005 A1; published Dec. 6, 2007), Buck (US 2009/0089065 A1; published Apr. 2, 2009), and Abe (US 2012/0253480 A1; published Oct. 4, 2012). Final Act. 17–28.[3]

## FINDINGS, CONCLUSIONS, AND CONTENTIONS

Regarding independent claim 1, the Examiner finds that Beliles uses a client device in a building communicating over a wireless network and an Internet-connected server device external to the building. Final Act. 17. Although the Examiner acknowledges that Beliles does not (1) capture human voice data by a microphone in the client device; (2) operate an actuator in a controlled device responsive to the captured voice data; and (3) send the voice data to the server via the wireless network, where the server receives the voice data over the Internet, the Examiner cites Buck as teaching these features. Final Act. 18–19. The Examiner also acknowledges that the Beliles/Buck system does not (1) process the captured voice data;

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[2] Because the Examiner withdrew rejections under §§ 101 and 112 (Ans. 3–4), those rejections are not before us.

[3] Throughout this opinion, we refer to (1) the Final Office Action mailed September 4, 2018 ("Final Act."); (2) the Appeal Brief filed October 3, 2018 ("Appeal Br."); (3) the Examiner's Answer mailed January 4, 2019 ("Ans."); and (4) the Reply Brief filed January 13, 2019 ("Reply Br.").

(2) send a message to the controlled device that is received by the controlled device; and (3) operate the actuator in the controlled device responsive to the received message, but cites Abe for teaching these features in concluding that the claim would have been obvious. Final Act. 19–20.

Appellant argues that the Examiner improperly combined the cited references. Appeal Br. 45–58; Reply Br. 2–5. According to Appellant, not only is the Examiner's proposed combination unclear, Beliles and Buck are non-analogous, and adding voice processing capabilities to Beliles as the Examiner proposes changes Beliles's principle of operation. Appeal Br. 45–49. Appellant further contends that the Examiner's articulated rationale to combine the references is improper because (1) the primary reference, Beliles, already has the capabilities for which Abe was cited; (2) it is unclear why these two references are analogous to each other; (3) the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in the Examiner's earlier restriction requirement; and (4) the Examiner picks and chooses subject matter from different embodiments in Abe to arrive at the claimed invention. Appeal Br. 53–58; Reply Br. 3–5. Appellant adds that Buck does not teach the voice data sending and receiving steps, and Beliles does not teach the recited Internet-connected server external to a building and wireless network. Appeal Br. 58–60; Reply Br. 5. Appellant argues various other recited limitations summarized below.

## ISSUES

Under § 103, has the Examiner erred by finding that Beliles, Buck, and Abe collectively would have taught or suggested:

(1) operating an actuator in a controlled device responsive to captured human voice data, where the method is used with a client device in a building communicating over a wireless network and an Internet-connected server device external to the building, where the client device sends the voice data to the server via the wireless network, and the server receives that data over the Internet as recited in claim 1?

(2) the particular limitations recited in dependent claims 2–5, 8, 9, 11, and 13–30?

II. Is the Examiner's proposed combination of the cited references supported by articulated reasoning with some rational underpinning to justify the Examiner's obviousness conclusion?

## ANALYSIS

### *Claims 1, 6, 7, and 10*

On this record, we are not persuaded of error in the Examiner's obviousness rejection of independent claim 1. As shown in Beliles's Figure 1 reproduced below, Beliles discloses a computer network 100 in a building comprising, among other things, fire sensor 123 connected to sensor translator 132 that is, in turn, connected to a network device (router 152) that is connected to network cloud 110 to which fire suppression device 161, door locks 162, and other physical control devices are connected. *See* Beliles ¶¶ 15–17, 27–29, 34.

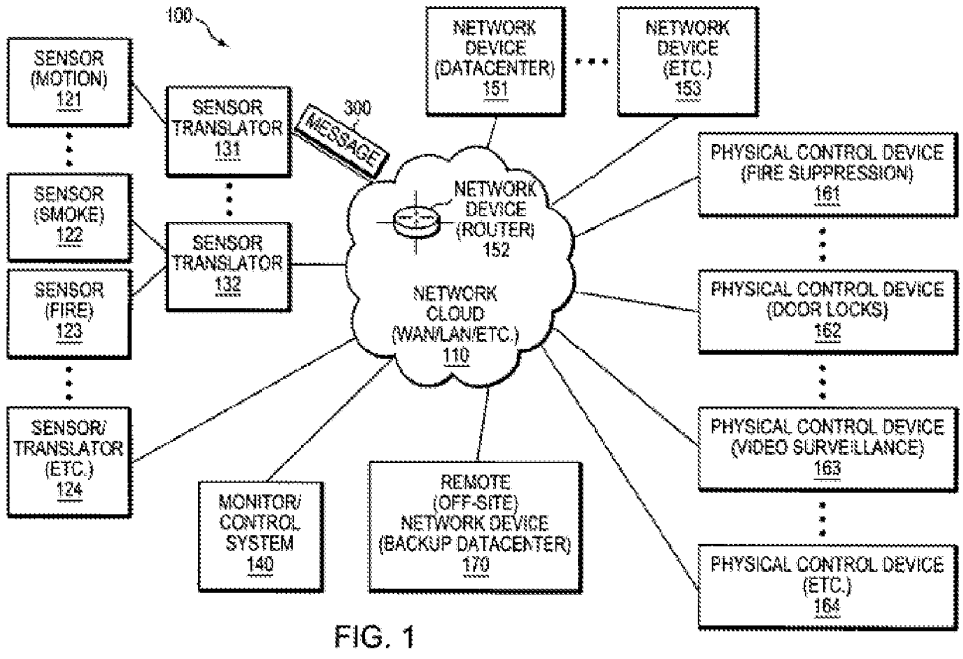



FIG. 1

**Beliles's computer network 100 in Figure 1**

As shown above, network cloud 110 is connected to various network devices 151–153 that include data centers, routers, personal computers, etc. Beliles ¶ 29. These network devices, detailed in Beliles's Figure 2 and paragraphs 31 to 33, are "client devices" at least with respect to the external monitoring/control system 140 that corresponds to the recited Internet-connected server device consistent with the Examiner's mapping. *See* Final Act. 17; Ans. 5–7 (citing Beliles ¶¶ 15–16, 34).

Although physical events, such as detected fires, can be conveyed from the sensors to monitoring/control system 140 using proprietary signaling systems, such as an internal fire alarm system, these events can also be sent over the Internet. Beliles ¶ 34. To the extent that Appellant contends that this Internet-based functionality must be limited to an internal

network within the building, and somehow cannot involve an external network (*see* Reply Br. 59–60), we disagree. Not only is there no persuasive evidence on this record to substantiate Appellant's contention, ordinarily skilled artisans would understand that external networks are the very essence of the Internet and the *World Wide* Web. Therefore, Beliles at least suggests an external network.

Nor does Appellant persuasively rebut the Examiner's reliance on Beliles's paragraph 27 for teaching communicating over a wireless network, particularly since Beliles teaches in that paragraph that network 100 may be configured as a wireless network. We likewise see no error in the Examiner's reliance on Beliles's monitoring/control system 140 for teaching the recited Internet-connected server device. *See* Ans. 5–7 (citing Beliles ¶ 34).

We also see no error in the Examiner's reliance on Buck for at least suggesting (1) capturing human voice data by a microphone in a client device, namely a vehicle; and (2) sending the voice data to the server via a wireless network, where the server receives the voice data over the Internet. Final Act. 18–19; Ans. 7. As shown in Buck's Figure 4, the system converts spoken words into commands using speech recognition device 402 connected to vehicle buses 408 and actuator 406. Buck ¶ 28. Notably, the buses may be *wireless* and convey control and/or actuator signals to *remote (e.g., out-of-vehicle)* destinations. *Id.*

Given this functionality, Buck at least suggests sending captured voice data wirelessly to a remote destination external to the vehicle. Although Buck does not specify these remote destinations that receive the captured voice data, we nonetheless see no reason why these destinations cannot

include Internet-connected servers as the Examiner indicates. *See* Final Act. 18; Ans. 7. To the extent Appellant contends otherwise, there is no persuasive evidence on this record to substantiate such a contention.

Given the Beliles/Buck system's Internet-based functionality, we see no error in the Examiner's reliance on Abe merely to show that providing an Internet-based control apparatus 101 that is external to a building is known in the art as shown in Abe's Figure 15, and that providing such external control functionality in connection with the Beliles/Buck system would have been at least an obvious variation. *See* Final Act. 19–20; Ans. 6; *see also* Abe ¶ 93. That (1) detected events associated with fires can be conveyed *over the Internet* from the sensors to monitoring/control system 140 as noted in Beliles's paragraph 34, and (2) captured voice data is sent *wirelessly* to a *remote* destination in Buck's paragraph 28 only bolsters the Examiner's findings and conclusions in this regard.

Nor does Appellant persuasively rebut the Examiner's mapping of Abe's control apparatus 101 to a control server (*see* Ans. 6)—a mapping that we find reasonable on this record given the control apparatus's external control capabilities for in-building networked sensor-based systems via Internet 300 in Figure 15. *See* Abe ¶¶ 93–96. As the Examiner indicates, Abe's in-building systems in Figure 15 include image display device 51 and air conditioner 52 that are controlled devices with actuators. *See* Ans. 6; Abe ¶ 95.

Given this functionality considered in light of the other cited references' teachings, we see no error in the Examiner's reliance on Abe for teaching (1) processing captured voice data received from the Beliles/Buck system; (2) sending a message to the controlled device over the Internet,

where the message is received by the controlled device via a wireless network; and (3) operating an actuator in the controlled device responsive to the received message. *See* Final Act. 19–20; Ans. 6.

Appellant's arguments regarding the alleged individual shortcomings of Beliles, Buck, and Abe (Appeal Br. 58–60) are unavailing where, as here, the rejection is based on the cited references' collective teachings. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Nor are we persuaded of error in the Examiner's rationale for combining Beliles, Buck, and Abe despite Appellant's arguments to the contrary (*see* Appeal Br. 45–58; Reply Br. 2–5). First, we see no error in the Examiner's articulated rationale for combining Beliles and Buck, namely to provide hands-free actuator control and operation using voice commands in connection with Beliles's system. *See* Final Act. 18–19; Ans. 4–5. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007).

To be sure, if the Examiner's proposed modification renders the prior art unsatisfactory for its intended purpose, the Examiner has failed to make a prima facie case of obviousness. *See In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). But that is not the case here. Providing voice-based control, such as that in Buck, in connection with Beliles's system as the Examiner proposes would not render Beliles's system unsuitable for its intended purpose as Appellant seems to suggest (*see* Appeal Br. 48–49), but would merely provide *additional* voice-based control capabilities to at least augment Beliles's sensor-based control system—an enhancement yielding a predictable result. *Accord* Ans. 4 (noting that combining Buck with Beliles

*improves* Beliles's system by *adding* human speech recognition and actuator voice control).

We see no error in the Examiner's proposed combination despite the fact that Buck's voice control system is used in connection with a vehicle. As noted previously, Buck's *wireless* buses 408 in Figure 4 convey control and/or actuator signals to *remote (e.g., out-of-vehicle)* destinations. Buck ¶ 28. Because Buck at least suggests sending captured voice data wirelessly to a remote destination external to the vehicle for control purposes, Buck is at least reasonably pertinent to Appellant's problem of sending captured data to a remote location for processing and control and, therefore, is analogous art. *See In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (noting that prior art is analogous if it is (1) from the same field of endeavor regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved).

We reach this conclusion despite Beliles's and Buck's different patent classifications as Appellant indicates. *See* Appeal Br. 46–47. Although these diverse classifications can constitute *some* evidence of "non-analogy," this evidence is far outweighed by the references' structural and functional similarities that render them analogous art. *See In re Ellis*, 476 F.2d 1370, 1372 (CCPA 1973) (noting that (1) diverse patent office classification of prior art references is some evidence of "non-analogy," and (2) cross-references in official search notes is some evidence of "analogy," the similarities and differences in structure and function of the references' disclosed inventions carry far greater weight).

Appellant's reliance on a non-precedential Board decision that, according to Appellant, held that a vehicle-based control was non-analogous

to a similar function in a building (Appeal Br. 46), is unavailing. Not only do the facts in that case differ from those at issue here, as a non-precedential decision, it is not binding on this panel in any event. *See* PTAB Standard Operating Procedure 2 (Rev. 10) ("SOP 2") § I(B), https://www.uspto.gov/sites/default/files/documents/SOP2%20R10%20FINAL.pdf.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 47), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Nor are we persuaded of error in the Examiner's rationale for combining Abe with the Beliles/Buck system despite Appellant's arguments to the contrary (*see* Appeal Br. 53–58; Reply Br. 3–5). A key aspect of the Examiner's rationale relies on the functionality of Abe's control apparatus in Figures 15 and 16. *See* Ans. 6. Given this functionality, the Examiner concludes that it would have been obvious to implement an internet-connected control server that (1) acquires and processes information, and (2) sends associated control commands over the Internet to a controlled device and actuator when an abnormality occurs. *See* Final Act. 20; Ans. 6.

We see no error in these findings and conclusions. Although the Examiner's citation to paragraphs 50 and 51 on page 19 of the Final Office Action pertains to Abe's first disclosed embodiment, we nevertheless see no reason why this control apparatus functionality could not also be provided in conjunction with that of Abe's second embodiment in Figure 15 as the Examiner proposes despite Appellant's arguments to the contrary (Appeal Br. 55). First, although Figure 15's embodiment uses a control apparatus 101 instead of control apparatus 100 in Figure 1, the two respective control apparatuses are nonetheless strikingly similar in many respects. As shown in Abe's Figures 2 and 16, control apparatus 101 has the same sections 11–15 as control apparatus 100, including control rule accumulation section 14. Given this striking similarity, the Examiner's reliance on Abe's first and second embodiments is reasonable, at least regarding the particular functionality from these embodiments on which the Examiner relies. We reach this conclusion even assuming, without deciding, that control apparatus 100 in Abe's Figure 2 is inside a building, unlike control apparatus 101 in Figure 15 as Appellant contends (Appeal Br. 55). Despite these

purported differences, the control apparatues' structure and control functionalities are nonetheless strikingly similar as noted above and we, therefore, see no error in the Examiner's reliance on teachings from these embodiments in the rejection.

Second, it is well settled that "[c]ombining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness." *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009). That is the case here. In short, in light of Abe, the Examiner's proposed enhancement to the Beliles/Buck system is not based on impermissible hindsight as Appellant alleges (Reply Br. 21), but rather uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Appellant's contention that it is ostensibly unclear why Beliles and Abe are analogous *to each other* (Appeal Br. 54) is unavailing. Prior art is analogous if it is (1) from the same field of endeavor as the invention, regardless of the problem addressed, or (2) reasonably pertinent to the particular problem with which the inventor is involved. *Bigio*, 381 F.3d at 1325. The analogous art test, then, does not ask whether the prior art references are analogous *to each other* as Appellant seems to suggest (*see* Appeal Br. 54), but rather asks whether the references are analogous to the claimed subject matter. *See id.; see also In re Kahn*, 441 F.3d 977, 986-87 (Fed. Cir. 2006). Because Beliles and Abe both involve environment control networks as the Examiner indicates (Ans. 6), the references are not only in the same field of endeavor as Appellant's invention, but they are also reasonably pertinent to Appellant's problem in that regard.

Lastly, we find unpersuasive Appellant's contention that the Examiner's combining Beliles and Abe is improper because both systems are ostensibly self-contained and independently operate effectively. *See* Appeal Br. 57–58. To be sure, the court in *Kinetic Concepts* noted that because two cited prior art references independently accomplished similar functions, namely draining fluids, each device independently operated effectively such that ordinarily skilled artisans seeking to create a better device to drain fluids from a wound would have no reason to combine the features of both devices into a single device. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1369 (Fed. Cir. 2012).

Not only are the facts in *Kinetic Concepts* regarding draining fluids from a wound entirely different from those at issue here, we also note that familiar items may have obvious uses beyond their primary purposes, and often ordinarily skilled artisans can fit multiple references' teachings together like puzzle pieces, as is the case here. *See KSR*, 550 U.S. at 420. On this record, then, the Examiner's proposed enhancement to the Beliles/Buck system, namely (1) processing captured voice data received from the Beliles/Buck system; (2) sending a message to the controlled device over the Internet, where the message is received by the controlled device via a wireless network; and (3) operating an actuator in the controlled device responsive to the received message (*see* Final Act. 19–20; Ans. 6) uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 6, 7, and 10 not argued separately with particularity.

*Claim 2*

We also sustain the Examiner's rejection of claim 2 reciting that the controlled device is part of, integrated with, *or* the same as, the client device. Our emphasis on the term "or" underscores that only one recited alternative need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 60–61), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 20; Ans. 7 (citing Buck ¶¶ 20, 31, 50).

To the extent that Appellant contends that the Examiner's findings regarding the limitations of claim 2 are inconsistent with claim 1 (*see* Appeal Br. 60), we disagree. In rejecting independent claim 1, the Examiner finds that Buck teaches, among other things, that a *client device* sends captured voice data to a server via a wireless network. *See* Final Act. 18. As Buck explains in paragraph 28, the vehicle's wireless buses convey control and/or actuator signals to *remote (e.g., out-of-vehicle)* destinations. Given this disclosure in light of the Examiner's findings, we see no reason why a vehicle and its data processing and transmission components cannot be a "client device" as claimed, particularly given the client-based voice data generated in Buck's vehicle that is sent to remote destinations which, as noted previously, include servers under the Examiner's interpretation. *See* Final Act. 18; Ans. 7.

In rejecting dependent claim 2, the Examiner finds that the controlled device, namely Buck's seating system, electronic entertainment, etc., is *part of* the client device, namely the vehicle. Final Act. 20 (citing Buck ¶ 20).

These findings not only satisfy the recited "part of" alternative noted above, they are also consistent with those made for independent claim 1.

In short, Appellant fails to persuasively rebut the Examiner's finding that Buck teaches a "controlled device," for example, a seating system, that is part of a "client device," namely a vehicle or related system. *See* Final Act. 18–19; Ans. 18.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 2.

*Claim 3*

We also sustain the Examiner's rejection of claim 3 reciting that the processing comprises performing a voice recognition algorithm for identifying the voice of a specific person. Despite Appellant's arguments to the contrary (Appeal Br. 61–62; Reply Br. 5), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 20; Ans. 7–8 (citing Buck ¶¶ 37–38; Abe, Fig. 16).

In short, Appellant does not persuasively rebut the Examiner's finding that Buck teaches the recited voice recognition algorithm, and that it would have been obvious to process that algorithm at a remote server, such as that disclosed by Abe. *See* Ans. 8. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417. Appellant's arguments regarding Buck's individual shortcomings in this regard (Appeal Br. 61–62) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 3.

*Claim 4*

We also sustain the Examiner's rejection of claim 4 reciting, in pertinent part, that (1) the client sends sensor data to the server via the wireless network, and (2) the server sends the message responsive to the sensor data. Despite Appellant's arguments to the contrary (Appeal Br. 62), we see no error in the Examiner's reliance on the cited prior art for at least suggesting the recited limitations for the reasons noted above and by the Examiner. Final Act. 21; Ans. 8 (citing Beliles ¶¶ 52, 54; Figs. 1, 6; Abe, Fig. 15). Appellant's arguments regarding Beliles's individual shortcomings in this regard (Appeal Br. 62) do not show nonobviousness where, as here, the rejection is based on the cited references' collective teachings. *See Merck*, 800 F.2d at 1097.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 4.

*Claim 5*

We also sustain the Examiner's rejection of claim 5 reciting, in pertinent part, the sensor is (1) a thermoelectric sensor that responds to a temperature *or* to a temperature gradient of an object using conduction, convection, or radiation, *or* (2) a photoelectric sensor that responds to a visible or an invisible light or gamma rays. Our emphasis on the term "or" underscores that only one of the recited sensors need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 63), we see no error in the Examiner's reliance on Beliles for at least suggesting the recited thermoelectric sensor, particularly in view of (1) Beliles's exemplary and non-limiting list of sensors 121–124 in Figure 1, and (2) event sensing involves updating current conditions that include *temperature* as noted in paragraph 52. *See* Final Act. 21–22; Ans. 8 (citing Beliles ¶¶ 16, 28, 52; Fig. 1).

Therefore, we are not persuaded that the Examiner erred in rejecting claim 5.

*Claim 8*

We also sustain the Examiner's rejection of claim 8 reciting, in pertinent part, capturing the human voice data by multiple microphones in the client device. Despite Appellant's arguments to the contrary (Appeal Br. 63–64; Reply Br. 5–6), we see no error in the Examiner's reliance on Buck (Final Act. 23) for at least suggesting the recited limitations, particularly in view of Buck's speech recognition system interfacing with an array of directional microphones in paragraph 31.

Given this teaching, we see no reason why directional microphones could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, detect sound in the direction of the speaker to detect speech, thus minimizing or attenuating detected sounds from other directions that are unrelated to speech. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 8.

*Claim 9*

For reasons similar to those made regarding claim 8, we also sustain the Examiner's rejection of claim 9 reciting that the multiple microphones are arranged as a directional microphone array operative to estimate a (1) number; (2) magnitude; (3) frequency; (4) Direction-of-Arrival; (5) distance; or (6) speed of a phenomenon impinging on the array. *See* Final Act. 23; Ans. 9 (citing Buck ¶ 31). Despite Appellant's arguments to the contrary (Appeal Br. 64–65; Reply Br. 5–6), we see no reason why directional microphones, such as those in Buck's paragraph 31, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, detect sound in the direction of the speaker to detect speech, thus minimizing or attenuating detected sounds from other directions that are unrelated to speech. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 9.

*Claims 11 and 12*

We also sustain the Examiner's rejection of claim 11 reciting, in pertinent part, the client device *or* controlled device are addressable in the wireless network or the Internet using an address stored in a volatile or non-volatile memory of the respective device for uniquely identifying the

respective device in the network. Our emphasis on the term "or" above underscores that only one of the recited addressable devices need be taught or suggested by the prior art to satisfy the claim.

A key aspect of the Examiner's rejection is that communication between devices is via data packets exchanged over a network using the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol. *See* Final Act. 24; Ans. 9–10. Notably, the Examiner also finds that network communication process 244 is used by network device 200 to communicate information packets and frames among *other* network devices. Ans. 9–10; Beliles ¶ 33.

Given this functionality, we see no error in the Examiner's conclusion that it would have been obvious for the client or controlled devices to be addressable to receive data packets under Beliles's TCP/IP scheme as the Examiner proposes even assuming, without deciding, that it was known to address ports connected to those devices, such as telephone connections in a dial-up environment as Appellant contends (Appeal Br. 65). In short, addressing the client or controlled devices themselves to receive data packets would have been at least an obvious variation in light of Beliles's network-based data communication functionality. *Accord* Bd. Dec. 43–44 (concluding that providing addressable devices in connection with the Beliles/Abe system would, among other things, facilitate identifying and communicating with those devices over a network). Nor has Appellant shown that addressing the client and controlled devices would have been uniquely challenging or otherwise beyond the level of ordinarily skilled artisans. *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

Because it would have been obvious for Beliles's client and controlled devices to be addressable as noted above, using an address stored in those devices for that purpose would have likewise been obvious as the Examiner indicates. *See* Final Act. 24; Ans. 9–10. We reach this conclusion noting the network devices' memory 240 which, as shown in Figure 2, stores data associated with *network communication* process 244 that, notably, communicates packets and frames of information among network devices. *See* Beliles ¶¶ 31–33. Even assuming, without deciding, that Beliles does not specify the content of this memory explicitly as Appellant contends (Appeal Br. 65), Beliles's Figure 2 nonetheless shows the box for memory 240 encompassing, among other things, network communication process 244—a process that exchanges data between addressed devices under the TCP/IP protocol as noted previously. Beliles, then, at least suggests storing addresses associated with this network communication process in at least memory 240.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 11, and claim 12 not argued separately with particularity.

*Claim 13*

We also sustain the Examiner's rejection of claim 13 reciting a Wireless Personal Area Network (WPAN) is (1) according to, or based on, Bluetooth™ or Institute of Electrical and Electronics Engineers (IEEE) 802.15.1-2005 standards, *or* (2) a wireless control network that is according to, or based on, Zigbee™, IEEE 802.15.4-2003, or Z-Wave™ standards. Our emphasis on the term "or" underscores that only one of the recited

WPAN aspects enumerated above need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 66; Reply Br. 6), we see no error in the Examiner's reliance on Buck (Final Act. 25; Ans. 10) for at least suggesting the recited limitations, particularly in view of Buck's speech recognition system interfacing with a network using wireless protocols, where the speech recognition controller is compliant with, among other protocols, Bluetooth™ and Zigbee™ in paragraph 52.

Given this teaching, we see no reason why a WPAN could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data regarding recognized speech wirelessly between devices using standard protocols. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 13.

*Claim 14*

We also sustain the Examiner's rejection of claim 14 reciting the wireless network is a Wireless Local Area Network (WLAN) that is according to, or based on, the recited IEEE standards. Although the Examiner's rejection incorrectly quotes claim 13 as Appellant indicates (Appeal Br. 66), we nonetheless deem this error harmless, for the Examiner's other findings in the rejection and the Answer are nonetheless commensurate with claim 14's limitations that recite a WLAN. *See* Final Act. 25; Ans. 10 (citing Beliles ¶ 27 and Figure 1 for teaching a LAN). We

see no harmful error in these findings, for Beliles notes in paragraph 27 that network cloud 110 can not only be wireless, but also a LAN.

Given this teaching, we see no reason why a WLAN could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data wirelessly between devices within a local area using standard protocols. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Appellant's contention that the Examiner's rejection of the parent claim is based on another reference and, therefore, Beliles purportedly cannot be used to teach the recited feature in a dependent claim (Reply Br. 6) is unavailing, for the Examiner relies on Beliles for teaching the recited wireless network in rejecting claim 1 from which claim 14 depends. *See* Final Act. 17 (finding that Beliles discloses a method for use with a client device in a building communicating over a *wireless* network); Ans. 7 (mapping Beliles's computer network 100 to the recited wireless network). And to the extent that Appellant contends that the Examiner's reliance on Beliles in rejecting claim 14 somehow conflicts with the Examiner's reliance on Buck in connection with the rejection of independent claim 1 (*see* Appeal Br. 66–67; Reply Br. 6), we disagree.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 14.

*Claim 15*

We also sustain the Examiner's rejection of claim 15 reciting the wireless network uses a wireless communication over a licensed *or*



Amazon EX1004 Page 445

unlicensed radio frequency (RF) band, that is an Industrial, Scientific and Medical (ISM) radio band. Our emphasis on the term "or" underscores that only one of the recited RF bands need be taught or suggested by the prior art to satisfy the claim.

Although the Examiner's indication in the rejection that claim 15 "does not teach or further define over the limitation in claim 13" is puzzling given the claims' different limitations as Appellant indicates (Appeal Br. 67–68), we nonetheless deem this error harmless, for the Examiner clarifies the rejection on page 10 of the Answer by citing Buck's wireless networks in paragraphs 51 and 52 that include, among other things, a Zigbee™ wireless network that the Examiner finds uses an unlicensed RF band as claimed—a finding that is undisputed. *See* Reply Br. 6 (acknowledging that Buck may disclose the recited feature).

Given this teaching, we see no reason why a wireless network using an unlicensed RF band, such as that disclosed in Buck's paragraphs 51 and 52, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data wirelessly between devices within a local area using conventional RF bands designated for that purpose. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 68), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a

petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 15.

*Claim 16*

We also sustain the Examiner's rejection of claim 16 reciting, in pertinent part, that the wireless network is a cellular telephone network that is either a Third *or* Fourth Generation network, each of which uses one of the recited alternative systems or protocols associated with those respective networks. Our emphasis on the term "or" underscores that only one of the recited networks need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 68–69; Reply Br. 7), we see no error in the Examiner's reliance on Buck (Final Act. 26; Ans. 10–11) for at least suggesting the recited limitations, particularly in view of Buck's speech recognition system interfacing with a network using *cellular* or wireless protocols or *cellular telephones* in paragraph 52.

Given this teaching, we see no error in the Examiner's conclusion that it would have been obvious to provide one of the recited cellular telephone networks in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, communicate data wirelessly between devices using known cellular telephone networks and associated data transmission schemes. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 16.

*Claim 17*

We also sustain the Examiner's rejection of claim 17 reciting that the client device *or* the controlled device is integrated in, part of, *or* entirely included in, an appliance. Our emphasis on the term "or" underscores that (1) only one of the recited devices, and (2) only one of the recited orientations with respect to the appliance need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 69–72; Reply Br. 7), we see no error in the Examiner's reliance on Abe's paragraph 34 (Final Act. 27; Ans. 11–12) for at least suggesting the recited limitations,

particularly since an appliance, such as air conditioner 52, is one of the devices to be controlled as shown in Figure 1. This functionality suggests that the controlled device is at least part of that appliance as claimed.

Given this teaching, we see no reason why the controlled device could not be at least part of an appliance in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, control automatically appliances that are commonly used in homes and offices, such as air conditioners, thus precluding the need to manually control those appliances. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 17.

*Claim 18*

We also sustain the Examiner's rejection of claim 18 reciting that the appliance's primary functionality is associated with food storage, handling, *or* preparation. Our emphasis on the term "or" underscores that only one of the recited functionalities need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 72; Reply Br. 7), we see no error in the Examiner's reliance on Abe (Final Act. 27; Ans. 11) for at least suggesting the recited limitations, particularly since air conditioner 52 is one of the devices to be controlled as shown in Figure 1.

Given this teaching, we see no reason why an appliance in the Beliles/Buck/Abe system, such as Abe's air conditioner 52, would not be at least *associated with* the recited functionalities as the Examiner proposes to,



Amazon EX1004 Page 449

among other things, use the air conditioner appliance in connection with storing or handling food by keeping food cooler to avoid spoilage. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 16.

*Claims 19–24*

We also sustain the Examiner's rejection of claims 19–24 reciting (1) various types of appliances and associated functionalities including heating food (claim 19), environmental control (claim 21), temperature control (claim 22), and cleaning (claim 23); and (2) various other types of appliances in claims 20 and 24.

Although the Examiner's indication in the rejection that each of claims 19 to 24 "does not teach or further define over the limitation in claim 17" is puzzling given the claims' different limitations as Appellant indicates (Appeal Br. 72–73), we nonetheless deem this error harmless, for the Examiner clarifies the rejection on pages 11 and 12 of the Answer by finding that the network-connected home appliances in Abe's paragraph 38 can include the recited appliances.

Despite Appellant's arguments to the contrary (Appeal Br. 72–73; Reply Br. 7–8), we see no error in the Examiner's reliance on Abe's paragraph 38 and Figure 1 (Ans. 11–12) for at least suggesting the recited limitations, particularly since air conditioner 52—a home appliance—is just one of the devices to be controlled as shown in Figure 1. Given Abe's exemplary and non-limiting reference to the home network connecting



Amazon EX1004 Page 450

*various types* of sensors *and devices* installed within a home, we see no error in the Examiner's finding that these various types of devices could include the devices and functionalities recited in claims 19 to 24 and are, therefore, obvious variations. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 73), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Therefore, we are not persuaded that the Examiner erred in rejecting claims 19–24.

*Claim 25*

We also sustain the Examiner's rejection of claim 25 reciting that the actuator is an electric light source that emits visible *or* non-visible light for illumination or indication, where the non-visible light is infrared, ultraviolet, X-rays, or gamma rays. Our emphasis on the term "or" underscores that only one of the recited light types need be taught or suggested by the prior art to satisfy the claim.

Despite Appellant's arguments to the contrary (Appeal Br. 73–75; Reply Br. 8–9),[4] we see no error in the Examiner's reliance on Buck (Final Act. 28; Ans. 12) for at least suggesting the recited limitations. Buck's speech recognition and control process interfaces with, among other things, in-vehicle devices that, through actuators, adjust electronic elements and devices—elements that reasonably include visible light sources, such as headlights or cabin lights as the Examiner indicates. *See* Final Act. 28; Ans. 25 (citing Buck ¶ 32). We reach this conclusion noting that Buck's paragraph 20 states, quite broadly, that the system can adjust or activate *any* vehicle-related system that includes not only a seating system, mirror controls, or entertainment systems, but also *any* in-vehicle or vehicle-related system.

[4] Appellant's assertion that the Examiner's rejection of claim 25 is based on Abe's paragraph 32 (Appeal Br. 73) is incorrect. Rather, the Examiner cites Buck's paragraph 32 to reject claim 25. *See* Final Act. 28.

Given these teachings that are replete with broad and non-limiting terms, and leaving aside the fact that illuminance is sensed in Abe's Figure 3, we see no reason why an electric visible light source actuator, such as an actuator for vehicle headlights or cabin lights, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, control the visible light source automatically via voice commands. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 25.

*Claims 26–30*

We also sustain the Examiner's rejection of claims 26–30 reciting (1) the electric light source comprises one of various types of alternative light sources (claim 26); (2) a motion actuator (claim 27); and (3) a sounder (claims 28–30).

Although the Examiner's indication in the rejection that each of claims 26 to 30 "does not teach or further define over the limitation in claim 25" (Final Act. 28) is puzzling given the claims' different limitations as Appellant indicates (Appeal Br. 76), we nonetheless deem this error harmless, for the Examiner clarifies the rejection on page 12 of the Answer by finding that Buck's paragraph 32 teaches various actuators that include headlights, sounders, and other actuators that enable mechanical adjustments.

Despite Appellant's arguments to the contrary (Appeal Br. 76; Reply Br. 9), we see no error in the Examiner's reliance on Buck's paragraph 32

(Ans. 12) for at least suggesting the recited limitations, particularly since Buck's speech recognition and control process interfaces with, among other things, in-vehicle devices that, through actuators, adjust electronic and mechanical elements and devices—elements that reasonably include visible light sources, motion actuators, and sounders. We reach this conclusion noting that Buck's paragraph 20 states, quite broadly, that the system can adjust or activate *any* vehicle-related system that includes not only a seating system, mirror controls, or entertainment systems, but also *any* in-vehicle or vehicle-related system.

Given these teachings that are replete with broad and non-limiting terms, we see no reason why actuators, such as the recited electric visible light source, motion actuator, and sounder, could not be provided in the Beliles/Buck/Abe system as the Examiner proposes to, among other things, control those sources automatically via voice commands. Such an enhancement uses prior art elements predictably according to their established functions—an obvious improvement. *See KSR*, 550 U.S. at 417.

To the extent that Appellant contends that the Examiner's obviousness rationale is inconsistent with the patentably-distinct inventions articulated in a restriction requirement made during prosecution of a parent application (*see* Appeal Br. 76), such a contention is unavailing. The propriety of the Examiner's restriction requirement that was made during prosecution is a petitionable matter that is not before us, as are objections regarding procedural inconsistencies associated with that requirement. *See* MPEP § 706.01 ("[T]he Board will not hear or decide issues pertaining to objections and formal matters which are not properly before the Board."); *see also* MPEP § 1201 ("The Board will not ordinarily hear a question that

should be decided by the Director on petition . . . ."); MPEP § 1002.02(c) (requiring that Technology Center Directors decide petitions from an Examiner's final decision requiring restriction in patent applications). Therefore, to the extent there are inconsistencies between the Examiner's restriction requirement and obviousness rejection, the Examiner's restriction requirement is not before us, nor are we bound by it. Rather, only the Examiner's obviousness rejection is before us—a rejection that is (1) articulated in the Final Office Action from which this appeal was taken, and (2) based solely on the cited prior art.

Therefore, we are not persuaded that the Examiner erred in rejecting claims 26–30.

## CONCLUSION

In summary:

| Claims Rejected | 35 U.S.C. § | Reference(s) /Basis | Affirmed | Reversed |
|---|---|---|---|---|
| 1–30 | 103 | Beliles, Buck, Abe | 1–30 | |

## TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

## AFFIRMED

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| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

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|---|---|---|---|---|---|---|
| | 1 | 8615374 | B1 | 2013-12-24 | Frederick M. Discenzo | |
| | 2 | 4472656 | A | 1984-09-18 | CORNELIS FRANX | |
| | 3 | 8244405 | B2 | 2012-08-14 | Imin Kao | |
| | 4 | 5696879 | A | 1997-12-09 | TROY L. CLINE | |
| | 5 | 5077512 | A | 1991-12-31 | HAROLD J. WEBER | |

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|---|---|---|---|---|---|---|
| | 1 | 20100281884 | A1 | 2010-11-11 | John Myron Rawski | |

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| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 2 | 20120190292 | A1 | 2012-07-26 | Alan James Skrepcinski | |
| | 3 | 20080291036 | A1 | 2008-11-27 | Robert Charles Richmond | |
| | 4 | 20150222852 | A1 | 2015-08-06 | Ronald Carter | |
| | 5 | 20100187832 | A1 | 2010-07-29 | Scott T. Holland | |
| | 6 | 20090189981 | A1 | 2009-07-30 | Jon Siann | |
| | 7 | 20130151200 | A1 | 2013-06-13 | Siew Kok Hui | |
| | 8 | 20100039253 | A1 | 2010-02-18 | SHIHUA ZANG | |
| | 9 | 20110047874 | A1 | 2011-03-03 | Scott B. Lowder | |
| | 10 | 20090033522 | A1 | 2009-02-05 | Peter Nils Skillman | |
| | 11 | 20180242859 | A1 | 2018-08-30 | Steven Francis LeBoeuf | |
| | 12 | 20110282168 | A1 | 2011-11-17 | Alan Robert Weiss | |

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| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 13 | 20130211858 | A1 | 2013-08-15 | Peter Ohnemus | |
| | 14 | 20100195601 | A1 | 2010-08-05 | Yan Zhang | |
| | 15 | 20120265026 | A1 | 2012-10-08 | Mohammad Shenasa | |
| | 16 | 20020112726 | A1 | 2002-08-22 | Matthew F. Schmidt | |
| | 17 | 20060206155 | A1 | 2006-09-14 | Tamir Ben-David | |
| | 18 | 20110050216 | A1 | 2011-03-03 | Robert Thomas STONE | |
| | 19 | 20090105605 | A1 | 2009-04-23 | Marcio Marc Abreu | |
| | 20 | 20120179067 | A1 | 2012-07-12 | William Oren Wekell | |
| | 21 | 20120130203 | A1 | 2012-05-24 | Stergios STERGIOU | |
| | 22 | 20110034912 | A1 | 2011-02-10 | Bassel de Graff | |
| | 23 | 20070208390 | A1 | 2007-09-06 | Jeffrey A. Von Arx | |

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| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 24 | 20090005720 | A1 | 2009-01-01 | Lev Ludin | |
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| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
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☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2020-03-08 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

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| **Filing Date:** | 23-Jul-2017 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |

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**Filing Fees for Utility under 35 USC 111(a)**

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| **Claims:** | | | | |
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| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 13-MAR-2020 |
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| Art Unit | 2456 |
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| | 2 | 20090055019 | A1 | 2009-02-26 | Walter Dan Stiehl | |
| | 3 | 20050216121 | A1 | 2005-09-29 | Tsutomu Sawada | |
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☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2020-01-05 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 15657163 |
| **Filing Date:** | 23-Jul-2017 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |

Filed as Small Entity

**Filing Fees for Utility under 35 USC 111(a)**

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Miscellaneous:** | | | | |
| SUBMISSION- INFORMATION DISCLOSURE STMT | 2806 | 1 | 120 | 120 |
| | | **Total in USD ($)** | | **120** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 38232300 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 08-JAN-2020 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 06:49:34 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | DA |
| Payment was successfully received in RAM | $120 |
| RAM confirmation Number | E202018749510740 |
| Deposit Account | |
| Authorized User | |
| The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: | |

## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Information Disclosure Statement (IDS) Form (SB08) | IDS10.pdf | 1034491<br>1d9679e093516e7c9aba462097346927526 2a572 | no | 4 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Fee Worksheet (SB06) | fee-info.pdf | 30018<br>b936282b29dc5f49332b9a59ffa4e8e271ad 7762 | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 1064509 | | |

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**National Stage of an International Application under 35 U.S.C. 371**
**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**
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PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**
**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

**U.S.PATENTS** Remove

| Examiner Initial* | Cite No | Patent Number | Kind Code[1] | Issue Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | 9821344 | | 2017-11-21 | Fabio Zsigmond | |
| | 2 | 9908153 | | 2018-03-06 | Fabio Zsigmond | |
| | 3 | 10213810 | | 2019-02-26 | Fabio Zsigmond | |
| | 4 | 10232408 | | 2019-03-19 | Fabio Zsigmond | |
| | 5 | 10239094 | | 2019-03-26 | Fabio Zsigmond | |
| | 6 | 9165320 | | 2015-10-20 | Brandon W. Belvin | |
| | 7 | 10026116 | | 2018-07-17 | Meir ZOHAR | |
| | 8 | 6813221 | | 2004-11-02 | Craig Barr | |

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 9 | 6546297 | | 2003-04-08 | MICHAEL T. GASTON | |

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| Examiner Initial* | Cite No | Publication Number | Kind Code[1] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear |
|---|---|---|---|---|---|---|
| | 1 | 20150362954 | A1 | 2015-12-17 | MEIR ZOHAR | |
| | 2 | 20180137462 | A1 | 2018-05-17 | MEIR ZOHAR | |
| | 3 | 20060220830 | A1 | 2006-10-05 | Raymond Walden Bennett | |
| | 4 | 20090076827 | A1 | 2009-03-19 | Clemens Bulitta | |
| | 5 | 20090271002 | A1 | 2009-10-29 | David Asofsky | |
| | 6 | 20070283005 | A1 | 2007-12-06 | Robert P. Beliles | |
| | 7 | 20150324706 | A1 | 2015-11-12 | Jeremy B. Warren | |
| | 8 | 20010041982 | A1 | 2001-11-15 | Toshinobu Kawasaki | |

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 9 | 20150138333 | A1 | 2015-05-21 | Richard Wayne DeVaul | |
| | 10 | 20080130520 | A1 | 2008-06-05 | Matthew P. Ebrom | |
| | 11 | 20090046715 | A1 | 2009-02-19 | RICHARD A. MCCOY | |
| | 12 | 20010025349 | A1 | 2001-09-27 | John N. Sharood | |
| | 13 | 20110170377 | A1 | 2011-07-14 | Ferdinand Villegas Legaspi | |
| | 14 | 20080031139 | A1 | 2008-02-07 | Keiro Muro | |
| | 15 | 20130235197 | A1 | 2013-09-12 | MATTHEW P. EBROM | |
| | 16 | 20110148651 | A1 | 2011-06-23 | Michael S. Hendrickson | |
| | 17 | 20110298301 | A1 | 2011-12-08 | Simon Wong | |
| | 18 | 20100298957 | A1 | 2010-11-25 | Jaime Sanchez Rocha | |
| | 19 | 20100211359 | A1 | 2010-08-19 | Neelesh B. Mehta | |

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

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**FOREIGN PATENT DOCUMENTS** Remove

| Examiner Initial* | Cite No | Foreign Document Number[3] | Country Code[2] i | Kind Code[4] | Publication Date | Name of Patentee or Applicant of cited Document | Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear | T[5] |
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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

| INFORMATION DISCLOSURE STATEMENT BY APPLICANT ( Not for submission under 37 CFR 1.99) | | |
|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2019-11-14 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 15657163 |
| **Filing Date:** | 23-Jul-2017 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |

Filed as Small Entity

**Filing Fees for Utility under 35 USC 111(a)**

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Miscellaneous:** | | | | |
| SUBMISSION- INFORMATION DISCLOSURE STMT | 2806 | 1 | 120 | 120 |
| | | **Total in USD ($)** | | **120** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 37759364 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 15-NOV-2019 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 05:14:16 |
| **Application Type:** | Utility under 35 USC 111(a) |

## Payment information:

| | |
|---|---|
| Submitted with Payment | yes |
| Payment Type | DA |
| Payment was successfully received in RAM | $120 |
| RAM confirmation Number | E2019AE615092395 |
| Deposit Account | |
| Authorized User | |
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## File Listing:

| Document Number | Document Description | File Name | File Size(Bytes)/ Message Digest | Multi Part /.zip | Pages (if appl.) |
|---|---|---|---|---|---|
| 1 | Information Disclosure Statement (IDS) Form (SB08) | IDS9.pdf | 1035497<br>9ba32a66cb45a938d3e9b4df54553c02143b0faa | no | 6 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Fee Worksheet (SB06) | fee-info.pdf | 30017<br>9f88dff9948b53d43818781c6a0738c88159fbbc | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| | | **Total Files Size (in bytes):** | 1065514 | | |

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**New International Application Filed with the USPTO as a Receiving Office**
**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 15/657,163 | 07/23/2017 | Yehuda BINDER | BINDER-014-US3 | 1088 |

131926 7590 01/15/2019

May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

| EXAMINER |
|---|
| KHAN, HASSAN ABDUR-RAHMAN |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2456 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 01/15/2019 | PAPER |

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United States Patent and Trademark Office

Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

MAY PATENTS LTD. C/O DORIT SHEM-TOV
P.O.B 7230
RAMAT-GAN, 5217102

Appeal No: 2019-002056
Application: 15/657,163
Appellant: Yehuda BINDER et al.

# Patent Trial and Appeal Board Docketing Notice

Application 15/657,163 was received from the Technology Center at the Board on January 15, 2019 and has been assigned Appeal No: 2019-002056.

In all future communications regarding this appeal, please include both the application number and the appeal number.

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By order of the Patent Trial and Appeal Board.

TTP

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**BEFORE THE PATENT TRIAL AND APPEALS BOARD (PTAB)**

ATTY.'S DOCKET: BINDER-014-US3

| | | |
|---|---|---|
| In re Application of: | ) | Confirmation No. 1088 |
| | ) | |
| Yehuda BINDER | ) | Art Unit: 2456 |
| | ) | |
| Appln. No.: 15/657,163 | ) | Examiner: Khan, Hassan Abdu |
| | ) | |
| Filed: July 23, 2017 | ) | Washington, D.C. |
| | ) | |
| For: SYSTEM AND METHOD FOR SERVER BASED CONTROL | ) | January 7, 2019 |
| | ) | |

Mail Stop Appeal Brief - Patents
Honorable Commissioner for Patents
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Honorable Commissioner:

**Reply to Examiner Answer**

Appellant submits this reply to the Board of Patent Appeals and Interferences response to the Examiner's Answer ("Answer") dated January 4, 2019 on appeal from the decision of the Examiner of Group Art Unit 2456 dated September 4, 2018, finally rejecting all pending claims under 35 U.S.C. 101, 35 U.S.C. 112(b) and 35 U.S.C. 103(a) [hereinafter 'Action' or 'Final action'], after a prosecution reopening.

**Regarding Arguments #4-#7: Improper combination of the references - Answer pages 4-5**

On page 4 of the Answer it is stated that all references are in the field of: "… *capturing sensor data, transmitting data over the network, processing data at control server and transmitting control commands over the network to perform the operations of the actuators*". However, the final Action clearly states on page 17 of the Action that "*Beliles does not explicitly disclose … sending to the server, … and operating an actuator in a controlled device in response to captured …*", hence contradicting the stated field definition.

It is further submitted that the combination and rationales described in the Answer are somewhat different from the ones used in the final action, rendering the combinations and rationales as 'moving targets'.

**Regarding Argument #4: Improper combination of the Beliles and Buck references - Answer page 5**

The Answer does not address all points raised. Additionally, the Answer states that "*The implementation of such a system* ***can be*** *in a building … or in a vehicle …*" Emphasis added). It is noted that "[O]bviousness concerns whether a skilled artisan **not only could have made but would have been motivated to make** the combinations or modifications of prior art to arrive at the claimed invention." (Belden v. Berk-TekLLC, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (Emphasis added).

It is further noted that the fact that both references MAY use external server does not render them analogous.

**Regarding Argument #5: Improper rationale for combining the Beliles and Buck references - Answer page 5**

The Answer does not address all points raised. Additionally, the Answer states that "… *it is well known in the art that adding the natural language processing, and voice recognition control will assist in hands-free control / operation of actuators*". However, the rationale for combining the Buck reference to the primary reference of Beliles is stated on page 19 of the Action as: '… *for the purpose of implementing the process to adjusts one or more devices using the speech patterns, accents and natural language processing*' – Hence adding "*adding the natural language processing, and voice recognition control*" is part of the rationale for combining, and the rationale does not address any "*hands-free control / operation of actuators*", rendering the Answer moot.

**Regarding Argument #6: Improper combination of the Beliles and Abe references – Answer pages 5-6**

a. The Answer does not address all points raised. Additionally, the Answer states that "… t*he references are analogous since they belong to the same field (i.e.* ***Environment Control Networks***) …" (Emphasis added). However, on page 4 it is stated that all references are in the field of: "… *capturing sensor data, transmitting data over the network, processing data at control server and transmitting control commands over the network to perform the operations of the actuators*". The field definition does not mention any 'environment' in general, and 'environment control' in particular.

b. The Answer clearly states that BOTH the Beliles and Abe references include 'Control Server' and 'Actuator'. Hence the Answer admits that the Beliles reference, being the primary reference, already include the advantages: "*Where the*

*secondary reference disclosed an advantage, and where the primary reference already possessed that advantage. See, e.g., Ex parte Anttila & Jung, No. 2010-006328, 2012 WL 4718520, at *3 (B.P.A.I. Sept. 27, 2012); Kastelewicz, 2009 WL 1719394, at *5-7; Ex parte Levine, No. 2010-001240, 2012 WL 4483329, at *3 (B.P.A.I. Sept. 25, 2012)*".

**Regarding Argument #7: Improper combination of the Beliles and Abe references – Answer page 6**

The Answer reiterate that the Abe reference "… *is used to specifically teach the limitation processing, by the server, responsive to the processing, sending a message*". However, on page 4 of the Answer it is stated that all references are in the field of: "… *capturing sensor data, transmitting data over the network,* ***processing data at control server and transmitting control commands*** *over the network to perform the operations of the actuators*" (Emphasis added). Hence he Answer admits that the Beliles reference ALREADY includes the recited limitation, and hence the limitation relied upon from the Abe reference are clearly included, as per the Action itself admission, in the primary reference (Beliles) already disclose the capabilities that the secondary reference (Abe) provided with its added disclosures, so no obviousness may be sustained. (*In Square, Inc. v. Cooper, IPR2014-00158, Paper No. 8, at 30 (15 May 2014)*). Further, it is not be appropriate to base this rejection on a combination of these references because the systems in Beliles and Abe are each self-contained and independently operate effectively:

> *Because each device independently operates effectively, a person having ordinary skill in the art, who was merely seeking to create a better device to drain fluids from a wound, would have no reason to combine the*

> *features of both devices into a single device.*

*Kinetic Concepts v. Smith and Nephew*, 688 F.3d 1342, at 1369 (CAFC, 2012).

**Regarding Argument #8: The Buck reference does not teach the recited features – Answer page 7**

It is noted that the Answer does not argue inherency but a clear teaching. The passages cited in the Answer are silent regarding any client / server arrangement, and regarding any Internet communication with any external server.

**Regarding Argument #9: The Beliles reference does not teach the recited features – Answer page 7**

It is noted that the Answer does not argue inherency but a clear teaching. The passages cited in the Answer are silent regarding the recited features.

**Regarding Argument #10: Improper rejection – Answer page 7**

It is noted that the Answer does not argue inherency but a clear teaching. The passages cited in the Answer are silent regarding the recited features.

**Regarding Argument #11: Improper rejection – Answer pages 7-8**

The Answer is not clear. Further, it seems that the Answer suggests improperly combining two secondary references in a not clear and explained way.

**Regarding Argument #14: No rationale provided – Answer page 9**

This is clear typo, and this argument relates to claim 8, as clearly noted by the section header.

**Regarding Argument #15: No rationale provided – Answer page 9**

The Appellant is not contesting that the Buck reference may disclose multiple microphones, but that the rationale for combining the Buck reference is not relevant to multiple microphones, and no rationale for modifying the primary reference with such a feature is provided, as required by the rules.

**Regarding Argument #16: The Beliles reference does not teach the recited limitations – Answer pages 9-10**

While the Beliles reference may disclose source or destination addresses, it does not necessarily suggest that **the devices themselves** are addressable.

**Regarding Argument #17: No rationale provided – Answer page 10**

The Appellant is not contesting that the Buck reference may disclose the recites feature, but that the rationale for combining the Buck reference is not relevant to this feature, and no rationale for modifying the primary reference with such a feature is provided, as required by the rules.

**Regarding Argument #18: No rationale provided – Answer page 10**

The Appellant is not contesting that the Beliles reference may disclose the recites feature, but that the rejection of the parent claim is based on another reference, thus the Beliles reference cannot be used to teach this feature in a dependent claim.

**Regarding Argument #19: Improper rejection – Answer page 10**

The Appellant is not contesting that the Buck reference may disclose the recited feature, but that the rationale for combining the Buck reference is not relevant to this feature,

and no rationale for modifying the primary reference with such a feature is provided, as required by the rules.

**Regarding Argument #20: Improper rejection – Answer pages 10-11**

The Appellant is not contesting that the Buck reference may disclose the recited feature, but that the rationale for combining the Buck reference is not relevant to this feature, and no rationale for modifying the primary reference with such a feature is provided, as required by the rules.

**Regarding Argument #22: Improper rejection – Answer page 11**

The Answer further states that "which includes, i*n broadest reasonable interpretation, all types of network-connected appliances …*". First, it is noted that the BRI standard is used to interpret claims in an examined application, and NOT to interpret prior-art reference. Second, it is submitted that no reasonable interpretation suggests that devices in a home network are appliances, such as the ones recited in the claims.

**Regarding Argument #23: Improper rejection – Answer pages 11-12**

The Answer states that "… *the limitations are the examples or simple iterations …*". The Appellant disagrees that the limitations are 'examples' or 'simple iterations'. Such characterization is clearly hindsight, and "*there is the temptation to engage in impermissible hindsight is especially strong with seemingly simple mechanical inventions*" [in Ruiz, 234 F. 3d at 665], and further "*simplicity is not inimical to patentability*" [In re Oetiker, 977 F.2d 1443, 1446 (Fed. Cir. 1992)]. Furthermore, "*The prior art reference must* ***clearly and***

***unequivocally disclose the claimed invention*** *or direct those skilled in the art to the invention without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference*." (Emphasis added), quoting In re Arkley, 455 F.2d 586 (CCPA 1972).

The Answer further states that "*In Broadest reasonable interpretation, all types of network-connected home appliances …*". It is noted that the BRI standard is used to interpret claims in an examined application, and NOT to interpret prior-art reference.

**Regarding Argument #24: Improper rejection – Answer page 12**

The Answer states that "… *the limitations are the examples or simple iterations …*". The Appellant disagrees that the limitations are 'examples' or 'simple iterations'. Such characterization is clearly hindsight, and "*there is the temptation to engage in impermissible hindsight is especially strong with seemingly simple mechanical inventions*" [in Ruiz, 234 F. 3d at 665], and further "*simplicity is not inimical to patentability*" [In re Oetiker, 977 F.2d 1443, 1446 (Fed. Cir. 1992)]. Furthermore, "*The prior art reference must* ***clearly and unequivocally disclose the claimed invention*** *or direct those skilled in the art to the invention without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference*." (Emphasis added), quoting In re Arkley, 455 F.2d 586 (CCPA 1972).

The Answer further states that "*In Broadest reasonable interpretation, the example of such electronic elements includes electric light sources such as headlights of the vehicle*". It is noted that the BRI standard is used to

interpret claims in an examined application, and NOT to interpret prior-art reference.

**Regarding Argument #25: Improper rejection – Answer page 12**

The Answer states that "… *the limitations are the examples or simple iterations* …". The Appellant disagrees that the limitations are 'examples' or 'simple iterations'. Such characterization is clearly hindsight, and "*there is the temptation to engage in impermissible hindsight is especially strong with seemingly simple mechanical inventions*" [in Ruiz, 234 F. 3d at 665], and further "*simplicity is not inimical to patentability*" [In re Oetiker, 977 F.2d 1443, 1446 (Fed. Cir. 1992)]. Furthermore, "*The prior art reference must* ***clearly and unequivocally disclose the claimed invention*** *or direct those skilled in the art to the invention without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference*." (Emphasis added), quoting In re Arkley, 455 F.2d 586 (CCPA 1972).

The Answer further states that "*In Broadest reasonable interpretation, the example of such actuators includes headlights, sounder, speaker, radio etc. in a vehicle*". It is noted that the BRI standard is used to interpret claims in an examined application, and NOT to interpret prior-art reference.



Amazon EX1004 Page 494

**Conclusion**

In conclusion, the rejection of claims 1-30 under 35 U.S.C. 103(a) should be cancelled, resulting allowance of the all pending claims.

Respectfully submitted,

By /Yehuda Binder/
Yehuda Binder
Registration No. 73,612



Amazon EX1004 Page 495

# Electronic Patent Application Fee Transmittal

| | |
|---|---|
| **Application Number:** | 15657163 |
| **Filing Date:** | 23-Jul-2017 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |

Filed as Small Entity

**Filing Fees for Utility under 35 USC 111(a)**

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| APPEAL FORWARDING FEE | 2413 | 1 | 1120 | 1120 |
| **Post-Allowance-and-Post-Issuance:** | | | | |

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Extension-of-Time:** | | | | |
| **Miscellaneous:** | | | | |
| | | **Total in USD ($)** | | **1120** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 34839643 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder/Dorit Binder |
| **Filer Authorized By:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 13-JAN-2019 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 12:19:09 |
| **Application Type:** | Utility under 35 USC 111(a) |

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| 1 | Certification and Transmittal of Appeal Forwarding Fee | aia0034.pdf | 222588<br>bef2ee8138300ffab70fd4dfdaa6ebb7cfbc431a | no | 2 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 2 | Reply Brief Filed | 40c-Reply-Brief.pdf | 55070<br>1548c6a46836be797dda1b620f6f77f06aee7d8f | no | 10 |
| **Warnings:** | | | | | |
| **Information:** | | | | | |
| 3 | Fee Worksheet (SB06) | fee-info.pdf | 30172<br>6746b50c0762bd37607eb989e4e7d9777eb57214 | no | 2 |
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**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**
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**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**
**New International Application Filed with the USPTO as a Receiving Office**
**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

Doc code: WFEE.APPEAL
Doc Description: Certification and Transmittal of Appeal Forwarding Fee

PTO/AIA/34 (06-14)

| **CERTIFICATION AND TRANSMITTAL OF APPEAL FORWARDING FEE** | Docket Number (Optional) BINDER-014-US3 |
|---|---|

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|---|---|---|
| | Application Number 15/657,163 | Filed July 23, 2017 |
| | For SYSTEM AND METHOD FOR SERVER-BASED CONTROL | |
| | Art Unit 2456 | Examiner KHAN, HASSAN ABDUR-RAHMAN |

37 CFR 41.45 specifies that, in order to avoid dismissal of the appeal, appellant must pay the fee set in 37 CFR 41.20(b)(4) within two months of the later of the date of either the examiner's answer, or a decision refusing to grant a petition under 37 CFR 1.181 to designate a new ground of rejection in an examiner's answer.

The undersigned certifies that the appropriate fee accompanies this transmittal.

The fee for forwarding this appeal is (37 CFR 41.20(b)(4)) $ _____

☑ Appellant asserts small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by 50%, and the resulting fee is: $ 1120

☐ Appellant certifies micro entity status. See 37 CFR 1.29. Therefore, the fee shown above is reduced by 75%, and the resulting fee is: $ _____
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

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☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 506726.

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Extensions of time under 37 CFR 1.136(a) for patent applications are not applicable to the time period set forth in 37 CFR 41.45. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for *ex parte* reexamination proceedings.

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I am the

☐ appellant

☑ attorney or agent of record Registration number 73612

☐ attorney or agent acting under 37 CFR 1.34 Registration number _____

Signature /Yehuda Binder/

Typed or printed name Yehuda Binder

Telephone Number +972-54-4444-577

Date January 13, 2019

**NOTE:** This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☑ * Total of 1 forms are submitted.

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 15/657,163 | 07/23/2017 | Yehuda BINDER | BINDER-014-US3 | 1088 |

131926 7590 01/04/2019

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| EXAMINER | |
|---|---|
| KHAN, HASSAN ABDUR-RAHMAN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2456 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

Application Number: 15/657,163
Filing Date: 23 JUL 2017
Appellant(s): BINDER et al.

_____
Yehuda Binder
Registration No. 73,612
Appellant

**OFFICE'S ANSWER**

This is in response to the appeal brief filed 10/03/18 appealing from the Office action mailed 09/04/18. This is one of the many cases belonging to the continuity of the same application family from the same applicant. And, two of the related cases are in appeal-pending with PTAB: 13/733,634 and 15/361,434.

**(1) Grounds of Rejection to be Reviewed on Appeal**

Every ground of rejection set forth in the Office action dated 09/04/18 from which the appeal is taken is being maintained by the Office except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

**WITHDRAWN REJECTIONS**

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner:

***Claim Objections***

Applicant's arguments, filed on 10/03/18 have been fully considered and the claim objections for claim 5 and claim 12 are withdrawn by the Office.

***Claim Rejections - 35 USC § 101***

Applicant's arguments, filed on 10/03/18 have been fully considered and the 35 USC § 101 rejection for claims 1 - 30 is withdrawn by the Office.

***Claim Rejections - 35 USC § 112***

Applicant's arguments, filed on 10/03/18 have been fully considered and the 35 USC § 112 rejection for claims 1 - 30 is withdrawn by the Office.

**(2) Response to Arguments**

The Office summarizes the various points raised by the appellant and addresses replies individually based on the Final Office Action dated 09/04/18. Several of the appellant's arguments in the appeal brief filed on 10/03/18 are same as the arguments presented on 09/04/18. Office's reply per the appellant's arguments presented in the Appeal Brief are as following:

**ARGUMENT (35 USC § 103) - Pg. 45 - 57:** In response to applicant arguments (#4 - #7), *"improper combination of the Belies and Buck and Abe references,"* the Office notes that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In response to applicant argument, the Office notes that all the references belong to analogous art (i.e. capturing sensor data, transmitting data over the network, processing data at a control server and transmitting control commands over the network to perform the operations of the actuators. Therefore, the combination of the references is proper, as explained: Beliles reference discloses (in ¶0004) a system for responding to events at a network device in a computer network. Buck reference improves the system by adding human speech recognition and providing voice control for the actuators (¶0028, ¶0031, ¶0049, and ¶0050). The Abe reference further improves the system by teaching an internet connected centralized control apparatus managing a wide area geographically distributed network, collecting sensor information, and

outputting the control commands using the control rules (Fig. 15, ¶0050 and ¶0051), and customizing the control of the device according to the sensor information, to make a user's life more comfortable (¶0037).

**ARGUMENT (35 USC § 103) - Pg. 45:** In response to applicant argument (#4), *"Beliles reference discloses a system in a building, and the Buck reference discloses a system in a vehicle … furthermore, the control in the Buck reference is based on a local device that is INTERNAL to the vehicle, while the claim explicitly recite a server that is EXTERNAL to the building,"* the Office notes that the references are analogous because both the said *systems* are performing the following steps: collecting data from the sensors, transmitting data over the network, processing data at a central server, generating control commands, and transmitting commands back to operate the actuators. The implementation of such a *system* can be in a building (e.g. a fire alarm and remotely controlled extinguisher system) or in a vehicle (e.g. a remotely controlled temperature system or audio system in a vehicle). Furthermore, the Office notes that Buck teaches EXTERNAL server (in ¶0028, wireless vehicle buses that interface with remote e.g., out-of-vehicle destinations. Beliles reference also teaches an EXTERNAL server (Monitor Control System 140 in Fig. 1).

**ARGUMENT (35 USC § 103) - Pg. 51:** In response to applicant argument (#5), *"the Action fails to provide any reasoning WHY any voice control is required to be added to the Beliles reference,"* the Office notes that it is well known in the art that adding the natural language processing, and voice recognition control will assist in hands-free control/operation of actuators, analogous to as the applicant claimed in their claims.

**ARGUMENT (35 USC § 103) - Pg. 53:** In response to applicant argument (#6), *"it is not clear what elements are equated to control server and to actuator in both the Beliles and Abe references … it is not*

*clear WHY these two references are considered as analogous to each other,"* the Office once again reiterates that both the references are analogous since they belong to the same field (i.e. Environment Control Networks) as defined by the Applicant's Disclosure on Pg. 75. Further, the mapping of control server and actuator, for the clear understanding of the applicant, is reiterated as follows:

- Beliles: Control Server (Monitor/Control 140, Fig 1)

  Actuator (e.g. Fire Sprinklers 161 or Door Locks 162 in Fig. 1)
- Abe: Control Server (101, Fig. 15)

  Actuator (e.g. Image Display Device 51 or Air Conditioner 52 in Fig. 15)

**ARGUMENT (35 USC § 103) - Pg. 55:** In response to applicant argument (#7), *"the stated rationale fails to show objective reason to combine the teachings of the references,"* the Office once again reiterates that the rationale to combine the references is to implement an internet-connected control server that acquires information, then processes and sends the control commands over the internet to the controlled device (Abe, Figs. 15 and 16).

**ARGUMENT (35 USC § 103) - Pg. 55:** In response to applicant argument (#7), *"the stated rationale fails to show objective reason to combine the teachings of the references,"* the Office once again reiterates that the Abe reference (Figs. 15 and 16) is used to specifically teach the limitation *processing, by the server, responsive to the processing, sending a message* and the rationale to combine Beliles, Buck and Abe is, for the purpose of implementing an internet-connected control server that acquires information, then *processes* and sends the control messages over the internet to the controlled device or actuator.

**ARGUMENT (35 USC § 103) - Pg. 58:** In response to applicant argument (#8), *"the Buck reference is silent regarding any server, any client, or regarding any Internet communication,"* the Office once again reiterates the mapping, for the clear understanding of the applicant, as follows:

- Buck: Client (Device or Structure that transports person or things e.g. Vehicle, ¶0028)
  Server (Remote Destination e.g. out-of-vehicle server, ¶0028)
  Internet Communication (Wireless Network e.g. Internet, ¶0050-52)

**ARGUMENT (35 USC § 103) - Pg. 59:** In response to applicant argument (#9), *"the Beliles reference do not disclose or mention the Internet-connected server and Wireless Network,"* the Office once again reiterates the mapping, for the clear understanding of the applicant, as follows:

- Beliles: Internet-Connected Server (Monitor/Control Systems 140, ¶0034 and Fig 1)
  Wireless Network (Computer Network 100, e.g. Wireless, ¶0027)

**ARGUMENT (35 USC § 103) - Pg. 60:** In response to applicant argument (#10), *"claim 2 recites integration of two devices, which is not relevant to the Buck-based claim limitations,"* the Office once again reiterates that the Buck reference teaches the entire claim 2 limitation i.e. *wherein the controlled device is part of, integrated with, or the same as the client device* (Buck, ¶0020) where the controlled device (i.e. seating system, electronic entertainment, mirror controls or navigation device etc.) are part of the client device (i.e. vehicle or vehicle related system).

**ARGUMENT (35 USC § 103) - Pg. 61:** In response to applicant argument (#11), *"the processing limitation is based on the Abe reference, hence rendering the rejection unclear and moot,"* the Office once again reiterates that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention

must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). The Buck reference teaches the voice recognition computation algorithm (¶0037-¶0038), and the processing of such algorithm in a remote server is taught by Abe reference (Control Apparatus, Fig. 16).

**ARGUMENT (35 USC § 103) - Pg. 62:** In response to applicant argument (#12), *"the Beliles reference and the Action are silent regarding sending the sensor data to an external server in general, and regarding any receiving a response from the external server in particular,"* the Office once again reiterates that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Beliles teaches (Figs. 1 and 6), sending network attached sensor data (e.g. motion sensor, smoke sensor, fire sensor etc.) to an External Control Server (Monitor/Control) via Wireless Network (Computer Network). The Office uses the Abe reference to teach the limitation of an internet connected control server that determines the control command based on the sensor information and control rules, and then sending a response from the control server to the actuator (Fig. 15).

**ARGUMENT (35 USC § 103) - Pg. 63:** In response to applicant argument (#13), *"the Beliles reference does not disclose any thermoelectric sensor,"* the Office once again reiterates that Beliles reference defines *sensors* (Fig. 1, ¶0016) as any network-attached devices that sense non-network events, e.g., physical events for instance, fires, floods, smoke, physical access, and in particular (¶0052) the reference teaches temperature (i.e. *thermoelectric* sensor is being used to sense the temperature).

**ARGUMENT (35 USC § 103) - Pg. 64:** In response to applicant argument (#14), *"claim 5 recites multiple microphones, which is not relevant to the Buck-based claim limitations and not relevant to the stated rationale,"* the Office notes that claim 5 does not recite anything about microphones. Hence the argument is moot.

**ARGUMENT (35 USC § 103) - Pg. 64:** In response to applicant argument (#15), *"claim 9 recites multiple microphones, which is not relevant to the Buck-based claim limitations and not relevant to the stated rationale,"* the Office once again reiterates that Buck teaches (in ¶0031) the use of one or more microphones or a microphone array that includes two or more directional microphones.

**ARGUMENT (35 USC § 103) - Pg. 65:** In response to applicant argument (#16), *"the Beliles reference and the Action are silent regarding the content stored in the memory in general, and regarding storing any addresses in particular,"* the Office once again reiterates that Beliles teaches (in ¶0035 - ¶0039) that the network device send a notification using the TCP/IP data packets, and the message includes one or more headers 310 (e.g., IP/ATM headers, etc.), and a data field 320. The memory 240 comprises a plurality of storage locations that are addressable by the processor 220 and the network interfaces 210 for storing software programs and data structures associated with the present invention. An operating system 242, portions of which are typically resident in memory 240 and executed by the processor, functionally organizes the network device by, inter alia, invoking operations in support of software processes and/or services executing on the network device. These software processes and/or services may comprise network services 247, network communication process 244, and response process 246. Network communication process 244 is used by the network device 200 to communicate

packets/frames of information among other devices of the network and to define the network address pool and scheme, packet format etc.

**ARGUMENT (35 USC § 103) - Pg. 66:** In response to applicant argument (#17), *"claim 13 recites WPAN which is not relevant to the Buck-based claim limitations,"* the Office reiterates that the WPAN is a Wireless Personal Area Network which is an example of a wireless network to connect personal devices (e.g. connecting phone with Bluetooth headset or connecting laptop with internet modem/router). Such wireless network can be implemented using Wi-Fi, Bluetooth, ZigBee, Mobile-Fi, Ultrawideband, WiMax, mobile WiMax, cellular, satellite etc. (as taught by Buck in ¶0052).

**ARGUMENT (35 USC § 103) - Pg. 67:** In response to applicant argument (#18), *"claim 14 recites WLAN which is not relevant to the Buck-based claim limitations,"* the Office once again reiterates that Beliles teaches (in Fig. 1, ¶0027) a network cloud 110, which can be a wide area network (WAN), local area network (LAN) etc.

**ARGUMENT (35 USC § 103) - Pg. 67:** In response to applicant argument (#19), *"the claim 15 is different from claim 13 by defining frequency bands and not specific technologies,"* the Office once again reiterates that Buck teaches (in ¶0051-¶0052) wireless networks (such as Wi-Fi, ZigBee, High Speed Packet Access, Mobile-Fi, Bluetooth, Ultrawideband, Wi-Fi, WiMax, mobile WiMax, cellular, etc.) and being operated in compliance (i.e. unlicensed bands such as Zigbee's 868 MHz in Europe, 915 MHz in USA, 2.4 GHz worldwide.)

**ARGUMENT (35 USC § 103) - Pg. 68:** In response to applicant argument (#20), *"claim 16 recites cellular networking which is not relevant to the Buck-based claim,"* the Office once again reiterates that

Buck teaches (in ¶0051-¶0052) wireless networks (such as Wi-Fi, ZigBee, High Speed Packet Access, Mobile-Fi, Bluetooth, Ultrawideband, Wi-Fi, WiMax, mobile WiMax, cellular, etc.)

**ARGUMENT (35 USC § 103) - Pg. 69:** In response to applicant argument (#21), *"clearly the second part of the rejection, namely: to control a plurality of home appliances, is not part of paragraphs 0034 or 0036 and are not found anywhere in the Abe reference,"* the Office once again reiterates that Abe teaches control of home appliance devices such as air conditioner 52 (in ¶0034).

**ARGUMENT (35 USC § 103) - Pg. 72:** In response to applicant argument (#22), *"the primary functionality of the appliance is associated with food storage, handling or preparation,"* the Office once again reiterates that Abe teaches control of devices on a home network (in ¶0038) which includes, in broadest reasonable interpretation, any or all types of network-connected appliances e.g. refrigerator, air conditioner 52, etc.

**ARGUMENT (35 USC § 103) - Pg. 72:** In response to applicant argument (#23), *"claim 19 defines the primary function of the appliance is heating food … claim 20 defines the appliance is a refrigerator, a freezer, a dishwasher, a food blender … claim 22 defines the primary function of the appliance is associated with temperature control,"* the Office maintains the rejection under § 103 and notes that in judging the patentability of the claims against the prior art, it is noted that the limitations are the examples or simple iterations as previously presented in other claims. The Office reiterates that all limitations were considered as Abe teaches control of devices on a home network (Fig.1, ¶0038). And by giving the example of such a device as an Air Conditioner 52, the Abe reference teaches, in broadest reasonable interpretation, all types of network-connected home appliances e.g. refrigerator, microwave oven, freezer, food blender, vacuum cleaner, coffee maker, HVAC system, heater, washing machines, clothes

dryers, dishwasher, iced-tea makers, answering machines, telephone sets, home cinema systems, HiFi systems, stoves, food processors, ovens, air conditioner, electric mixers, CD and DVD players, induction cookers, electric furnaces, trash compactors, and dehumidifiers (as noted in Applicant Disclosure ¶0048).

**ARGUMENT (35 USC § 103) - Pg. 73:** In response to applicant argument (#24), *"the second part of the rejection, namely: e.g. controlling the headlights, cabin lights or the fog-lights, controlling the audio speakers and volume … is not part of paragraph 0032 and is not found anywhere in the Buck reference,"* the Office maintains the rejection under § 103 and notes that in judging the patentability of the claims against the prior art, it is noted that the limitations are the examples or simple iterations as previously presented in other claims. The Office once again reiterates that Buck teaches (in ¶0032) that the devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors, sensor thresholds, visual/aural setting, etc.) that may be used to adjust mechanical and/or electronic elements and devices. In broadest reasonable interpretation, the example of such electronic elements includes electric light sources such as headlights of the vehicle.

**ARGUMENT (35 USC § 103) - Pg. 76:** In response to applicant argument (#25), *"each of the claim clearly further defines a different actuator,"* the Office maintains the rejection under § 103 and notes that in judging the patentability of the claims against the prior art, it is noted that the limitations are the examples or simple iterations as previously presented in other claims. The Office once again reiterates that Buck teaches (in ¶0032) that the devices may provide electronic and/or mechanical adjustments (e.g., through actuators, servo-motors etc.) that may be used to adjust mechanical and/or electronic elements and devices in a vehicle. In broadest reasonable interpretation, the example of such actuators includes headlights, sounder, speaker, radio etc. in a vehicle.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/HASSAN A. KHAN/
Examiner, Art Unit 2456

Conferees (12/19/2018):

/RICHARD G KEEHN/
Primary Examiner, Art Unit 2456

/PHILIP J CHEA/
Supervisory Patent Examiner, Art Unit 2456

**Requirement to pay appeal forwarding fee:** In order to avoid dismissal of the instant appeal in any application or ex parte reexamination proceeding, 37 CFR 41.45 requires payment of an appeal forwarding fee within the time permitted by 37 CFR 41.45(a), unless appellant had timely paid the fee for filing a brief required by 37 CFR 41.20(b) in effect on March 18, 2013.

| Index of Claims | Application/Control No. | Applicant(s)/Patent Under Reexamination |
|---|---|---|
| | 15/657,163 | BINDER et al. |
| | **Examiner** | **Art Unit** |
| | HASSAN A KHAN | 2456 |

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| ✓ | Rejected | - | Cancelled | N | Non-Elected | A | Appeal |
| = | Allowed | ÷ | Restricted | I | Interference | O | Objected |

**CLAIMS**

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

| CLAIM | | DATE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Final | Original | 09/29/2017 | 01/19/2018 | 06/18/2018 | 08/30/2018 | 12/28/2018 | | | | |
| | 1 | ✓ | ✓ | ✓ | ✓ | A | | | | |
| | 2 | ✓ | ✓ | ✓ | ✓ | A | | | | |
| | 3 | ✓ | ✓ | ✓ | ✓ | A | | | | |
| | 4 | ✓ | ✓ | ✓ | ✓ | A | | | | |
| | 5 | ✓ | ✓ | ✓ | ✓ | A | | | | |
| | 6 | ✓ | ✓ | ✓ | ✓ | A | | | | |
| | 7 | ✓ | ✓ | ✓ | ✓ | A | | | | |
| | 8 | ✓ | ✓ | ✓ | ✓ | A | | | | |
| | 9 | ✓ | ✓ | ✓ | ✓ | A | | | | |
| | 10 | ✓ | ✓ | ✓ | ✓ | A | | | | |
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| | 28 | ✓ | ✓ | ✓ | ✓ | A | | | | |
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Doc description: Information Disclosure Statement (IDS) Filed

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**INFORMATION DISCLOSURE STATEMENT BY APPLICANT**
**( Not for submission under 37 CFR 1.99)**

| | |
|---|---|
| Application Number | 15657163 |
| Filing Date | 2017-07-23 |
| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
| Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| Attorney Docket Number | BINDER-014-US3 |

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|---|---|---|---|---|---|---|
| | 1 | 20040267385 | A1 | 2004-12-30 | Ronald R. Lingemann | |
| | 2 | 20180253069 | A1 | 2018-09-06 | Reza Raji | |
| | 3 | 20080215391 | A1 | 2008-09-04 | Kevin J. Dowling | |
| | 4 | 20160218884 | A1 | 2016-07-28 | Matthew P. EBROM | |
| | 5 | 20110251807 | A1 | 2011-10-13 | Patrick A. Rada | |

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.A.K/

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| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 6 | 20120228952 | A1 | 2012-09-13 | Katherine L. Hall | |
| | 7 | 20140170275 | A1 | 2014-06-19 | Domenic Bordin | |
| | 8 | 20150226439 | A1 | 2015-08-13 | Conrad S. Mikulec | |
| | 9 | 20120325197 | A1 | 2012-12-27 | Ferdinand Villegas Legaspi | |
| | 10 | 20090183729 | A1 | 2009-07-23 | Sydney Barkhouse | |
| | 11 | 20070220907 | A1 | 2007-09-27 | Gregory A. Ehlers | |
| | 12 | 20120093132 | A1 | 2012-04-19 | Ahmadreza (Reza) Rofougaran | |

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| Examiner Initials* | Cite No | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published. | T[5] |
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| Examiner Signature | /HASSAN A KHAN/ | Date Considered | 12/31/2018 |
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| | Attorney Docket Number | BINDER-014-US3 |

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2018-11-19 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**



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| First Named Inventor | Yehuda Binder |
| Art Unit | 2456 |
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| | 1 | 20040267385 | A1 | 2004-12-30 | Ronald R. Lingemann | |
| | 2 | 20180253069 | A1 | 2018-09-06 | Reza Raji | |
| | 3 | 20080215391 | A1 | 2008-09-04 | Kevin J. Dowling | |
| | 4 | 20160218884 | A1 | 2016-07-28 | Matthew P. EBROM | |
| | 5 | 20110251807 | A1 | 2011-10-13 | Patrick A. Rada | |

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|---|---|---|
| | Application Number | 15657163 |
| | Filing Date | 2017-07-23 |
| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 6 | 20120228952 | A1 | 2012-09-13 | Katherine L. Hall | |
| | 7 | 20140170275 | A1 | 2014-06-19 | Domenic Bordin | |
| | 8 | 20150226439 | A1 | 2015-08-13 | Conrad S. Mikulec | |
| | 9 | 20120325197 | A1 | 2012-12-27 | Ferdinand Villegas Legaspi | |
| | 10 | 20090183729 | A1 | 2009-07-23 | Sydney Barkhouse | |
| | 11 | 20070220907 | A1 | 2007-09-27 | Gregory A. Ehlers | |
| | 12 | 20120093132 | A1 | 2012-04-19 | Ahmadreza (Reza) Rofougaran | |

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| | First Named Inventor | Yehuda Binder |
| | Art Unit | 2456 |
| | Examiner Name | KHAN, HASSAN ABDUR-RAHMAN |
| | Attorney Docket Number | BINDER-014-US3 |

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

| Signature | /Yehuda Binder/ | Date (YYYY-MM-DD) | 2018-11-19 |
|---|---|---|---|
| Name/Print | Yehuda Binder | Registration Number | 73612 |

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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| **Application Number:** | 15657163 |
| **Filing Date:** | 23-Jul-2017 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Filer:** | Yehuda Binder |
| **Attorney Docket Number:** | BINDER-014-US3 |

Filed as Small Entity

**Filing Fees for Utility under 35 USC 111(a)**

| Description | Fee Code | Quantity | Amount | Sub-Total in USD($) |
|---|---|---|---|---|
| **Basic Filing:** | | | | |
| **Pages:** | | | | |
| **Claims:** | | | | |
| **Miscellaneous-Filing:** | | | | |
| **Petition:** | | | | |
| **Patent-Appeals-and-Interference:** | | | | |
| **Post-Allowance-and-Post-Issuance:** | | | | |
| **Extension-of-Time:** | | | | |

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| | | **Total in USD ($)** | | **120** |

| Electronic Acknowledgement Receipt | |
|---|---|
| **EFS ID:** | 34346910 |
| **Application Number:** | 15657163 |
| **International Application Number:** | |
| **Confirmation Number:** | 1088 |
| **Title of Invention:** | SYSTEM AND METHOD FOR SERVER-BASED CONTROL |
| **First Named Inventor/Applicant Name:** | Yehuda BINDER |
| **Customer Number:** | 131926 |
| **Filer:** | Yehuda Binder |
| **Filer Authorized By:** | |
| **Attorney Docket Number:** | BINDER-014-US3 |
| **Receipt Date:** | 19-NOV-2018 |
| **Filing Date:** | 23-JUL-2017 |
| **Time Stamp:** | 13:58:08 |
| **Application Type:** | Utility under 35 USC 111(a) |

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| **Warnings:** | | | | | |
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| 2 | Fee Worksheet (SB06) | fee-info.pdf | 29913<br>265ac96cad764d0131b870223ea7d871a9cb13e2 | no | 2 |
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**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**BEFORE THE PATENT TRIAL AND APPEALS BOARD (PTAB)**

ATTY.'S DOCKET: BINDER-014-US3

| | | |
|---|---|---|
| In re Application of: | ) | Confirmation No. 1088 |
| | ) | |
| Yehuda BINDER | ) | Art Unit: 2456 |
| | ) | |
| Appln. No.: 15/657,163 | ) | Examiner: Khan, Hassan Abdu |
| | ) | |
| Filed: July 23, 2017 | ) | Washington, D.C. |
| | ) | |
| For: SYSTEM AND METHOD FOR SERVER BASED CONTROL | ) | October 3, 2018 |
| | ) | |

Mail Stop Appeal Brief - Patents
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Dear Honorable Commissioner:

## APPEAL BRIEF

Appellant submit this Appeal Brief to the PATENT TRIAL AND APPEALS BOARD (PTAB) on appeal from the decision of the Examiner of Group Art Unit 2456 dated September 4, 2018, finally rejecting all pending claims under 35 U.S.C. 101, 35 U.S.C. 112(b) and 35 U.S.C. 103(a) [hereinafter 'Action' or 'Final action'], after a prosecution reopening.

## Real Party of Interest

The real party in interest is May Patents Ltd., the assignee of record.

## Related Appeals and Interferences

Appeal No. 2018-007694 was docketed July 25, 2018, from parent application 13/733,634 that claims the same priority and includes the same specifications as this application. This appeal may be related to, directly affect or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

This appeal may be related to, directly affect or be directly affected by, or have a bearing on the Board's decision relating to a Notice of appeal filed on August 9, 2018 in co-pending applications Nos. 15/361,434 and 15/716,881, not yet docketed with the PTAB. The application Nos. 15/361,434 and 15/716,881 claim the same priority and includes the same specification as this application.

## Status of Claims

Claims 1-30 are pending in the application, and are attached in Appendix A. The pending claims stand rejected in the Final Action dated September 4, 2018 under 35 U.S.C. §103(a).

## Status of Amendments

Amendments have been made to the pending claims in a response to the final Office Action filed September 25, 2018.

## Summary of Claimed Subject Matter

Claim 1 discloses a method for operating an actuator (such as item 61a, 61b in Figure 6) in a controlled device (item 23a, 23b, or 23c in Figure 2; item 60 in Figure 5; page 117, line 25, to page 118, line 16) in response to captured

human voice data, for use with a client device (item 13a, 13b, or 13c in Figure 1; item 23a, 23b, or 23c in Figure 2; item 50 in Figure 5; page 83, lines 4-22) in a building (such as item 189 in Figure 2) communicating over a wireless network (such as numerals 14a, 14b, or 22 in Figure 2 or Figure 24; page 11, line 20, to page 12, line 20; page 76, lines 10-29; page 163, lines 9-22) and an Internet-connected server device (item 24 in Figure 2, item 151 in figure 15; page 76, line 10, to p[age 77, line 8) external to the building. The method comprises capturing (item 171 in Figure 17), by a microphone (such as items 51a, 51b in Figure 5) in the client device, the human voice data; sending to the server, by the client device via the wireless network, the captured human voice data; receiving (item 192 in Figure 19), by the server over the Internet, the captured human voice data; processing (item 192 in Figure 19), by the server, the captured human voice data; responsive to the processing, sending (item 175 in Figure 19) a message, by the server to the client over the Internet; receiving, by the controlled device via the wireless network, the message; and operating the actuator (page 112, lines 13-25; page 117, line 25, to page 118, line 16) in the controlled device in response to the received message (item 150a in Figure 15a; item 170 in Figure 17; page 20, lines 22-31; page 41, lines 1-17; page 42, line 21, to page 44, line 15; page 162, line 24, to page 163, line 8).



Amazon EX1004 Page 532

## Argument

**Ground of Rejection to be Reviewed on Appeal**

Office Action, section 5 page 3

Claim 5 is objected to since it" comprises of distinct types of sensors …".

**Argument #1: Claim 5 is in a proper form**

The Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g). Further, the Action admits that both alternatives define 'sensors', hence clearly share 'common use' of sensing, and as such even allowed as Markush claims.

**Ground of Rejection to be Reviewed on Appeal**

Office Action, sections 7-38 pages 3-14

Claims 1-30 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter.

**Argument #2: General**

a. It is submitted that it is improper to provide an objection regarding formalities only in a prosecution reopening that is **the third action** of this application, while the claims have not been effectively amended regarding these objections. It is noted that according to the rules and the MPEP, such as in MPEP 2103, each action is preceded by analysis of the claims

(including ALL their limitations) **for all statutory provisions, including compliance with 35 U.S.C. 112.** In particular, in this case it seems that nearly ALL CLAIMS suddenly became indefinite as part of the prosecution re-opening.

b. It is well settled that "*both **the examiner** and the Board are **presumed to be skilled in the art***" (In re Lee, 277 F.3d, 1345 (Fed. Cir. 2002)). Second, according to the rules and the MPEP, such as in MPEP 2103, each action is preceded by analysis of the claims (including ALL their limitations) for all statutory provisions, including compliance with 35 U.S.C. 112, and according to MPEP 2103(B), the examiner should "***Review the Detailed Disclosure and Specific Embodiments of the Invention To Understand What the Applicant Has Invented***" (Emphasis in original). Further, MPEP 2103(C) states that: "*USPTO personnel should begin claim analysis by identifying and evaluating each claim limitation …. USPTO personnel are to correlate each claim limitation to all portions of the disclosure that describe the claim limitation.*". Furthermore, MPEP 2103 (IV)(B) states that the examiner should "***B. Determine Whether the Claimed Invention Complies with 35 U.S.C. 112(a) or 35 U.S.C. 112, First Paragraph Requirements***" (Emphasis in original). Further, according to 37 CFR 1.104 (Nature of examination) in section (b) 'Completeness of examiner's action', "***The examiner's action will be complete as to all matters,*** *except that in appropriate circumstances, such as misjoinder of invention, fundamental defects in the application, and the like, the action of the examiner may be limited to such matters before further action is made.*" (Emphasis added).

The claim rejected in the Action as indefinite was present in the claims **from the initial filing**, and **was NOT rejected under §112 in the former office actions** (as well as in other office action in co-pending applications having the same specification and the same priority date). It follows that according to the rules and the MPEP, in all the above occasions, the Examiner, serving as a "*person skilled in the relevant art*" (*see* In re Lee, 277 F. 3d 1345 (Fed. Cir. 2002)), was clearly '*reasonably conveyed*' that the claimed terms are supported in the specification, and that '*the inventor was in possession of the claimed invention*', and thus these claims meet the burden of §112.

c. The operative standard for determining whether this requirement has been met is "*whether those skilled in the art would understand what is claimed when the claim is read in light of the specification*". Orthokinetics Inc. v. Safety Travel Chairs Inc., 806 F.2d 1565, 1576, 1 USPQ 2d 1081, 1088 (Fed. Cir. 1986), quoted in Beachcombers International, Inc. v. Wildewood Creative Products, Inc., 31 USPQ 2d 1653, 1656 (Fed. Cir. 1994). This is reinforced by section 2173.04 of the MPEP which states: "*Breadth of a claim is not to be equated with indefiniteness... If the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. 112, second paragraph*".

d. The Action states in the specific rejections that "… *detailed explanation with exact examples and diagrams are required for clarification* ….". The claims, in particular when interpreted under BRI, need not any additional details, and

the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel-Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 1 – 'controlled device' and 'client device' (Section 7).**

a. The Action states that "Claim 1 uses the phrase *controlled device* and *client device* interchangeably". The appellant submits that claim 1 clearly recites that *controlled device* and *client device* are two different and distinct entities, and are not necessarily interchangeable. Further, claim 2 clearly limits the relation between these two entities, reciting that "*the controlled device is part of, integrated with, or the same as, the client device*".

b. The Action states that "*these terms, their relationship and their functionality with respect to each other is not distinctly defined in the specification*". The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness*."). Further, claim 1 does not recite any direct relationship between two entities.

c. The terms 'controlled device' and 'client device' are well known in the art and are exampled and described at least in paragraphs 0006-0007 and 0031 of the related publication US 2017/0331899.

d. Furthermore, "*[a] claim is indefinite when it contains words or phrases whose meaning is unclear.*" In re Packard, 751 F.3d 1310, 1314 (Fed. Cir. 2014). In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174.

e. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).].

**Regarding claim 1 – 'capturing' and 'captured' (Section 8).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and are exampled and described at least in paragraphs 0042, 0055, 0061, 0163, 0504, 0520, 0521, and 0524 of the related publication US 2017/0331899.

b. Furthermore, "*[a] claim is indefinite when it contains words or phrases whose meaning is unclear.*" In re Packard, 751

F.3d 1310, 1314 (Fed. Cir. 2014). In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).].

**Regarding claim 1 – 'operating the actuator' (Section 9).**

a. The rejection requires a clarification "if *operating* means a standard actuator response or some form of *remote-controlled* actuator". Hence, it is clear that the term is well-understood, and thus meets the operative standard "*whether those skilled in the art would understand what is claimed when the claim is read in light of the specification*", and that the term is clear - "*[a] claim is indefinite when it contains words or phrases whose meaning is unclear.*" In re Packard, 751 F.3d 1310, 1314 (Fed. Cir. 2014). Thus, the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).].

**Regarding claim 1 – 'server' (Section 9).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). This term is well known in the art and are exampled and described at least in paragraphs

0007 and 0270 of the related publication US 2017/0331899. Further, the rejection suggests various variants or implementations for a 'server', hence clearly admitting that the term is clear to the Examiner itself.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel-Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 2 – 'is part of, integrated with, or the same as' (Section 10).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). This terms are well known in the art and are exampled and described at least in paragraphs 0044, 0048, 0177, and 0568 of the related publication US 2017/0331899.

b. According to the Action, "*It is unclear how the controlled device can be part of, integrated with or same as the client device …*'. Hence it is admitted that the terms are well understood by the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 3 – 'voice recognition algorithm' (Section 11).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). This term is well known in the art and are exampled and described at least in paragraphs 0521-0524 and 0541-0542 of the related publication US 2017/0331899.

b. According to the Action, "… *the use and working of voice recognition algorithm is unclear and confusing …*'. Hence it is admitted that the term terms is well understood by the

Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel-Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claims 4 & 5 – 'sensor data' (Section 12).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). This term is well known in the art and even defined in the claim itself: "… *the client device further comprises a sensor that outputs sensor data that responds to a physical phenomenon*", as well as in paragraphs 0188-0190 and 0200-0202 of the related publication US 2017/0331899.

b. Furthermore, "*[a] claim is indefinite when it contains words or phrases whose meaning is unclear.*" In re Packard, 751 F.3d 1310, 1314 (Fed. Cir. 2014). In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed

subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

**Regarding claim 5 – 'works on conduction, convection or radiation' (Section 13).**

a. These terms are well known in the art and described in paragraphs 0108, 0141, and 0394 of the related publication US 2017/0331899.

b. The Action states that "… *the working of such a thermoelectric sensor … using ALL of these methods, is not distinctly defined* …". However, the claim clearly defines the operation in an alternative method using **'or'**, and does not require ALL methods to be used together. The Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g).

**Regarding claim 6 – 'affecting, changing, producing or creating a physical phenomenon …' (Section 14).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and in the specification.

b. Furthermore, "*[a] claim is indefinite when it contains words or phrases whose meaning is unclear.*" In re Packard, 751 F.3d 1310, 1314 (Fed. Cir. 2014). In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

**Regarding claim 6 – 'directly or indirectly' (Section 15).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and in the specification.

b. According to the Action, "… *the examples of flow rate … are nor defined …*'. Hence it is admitted that the term terms is well understood by the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written*

*description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 7 – 'audio, sound and flow rate' (Section 16).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and in the specification. The Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g).

b. According to the Action, "… *the examples of flow rate … are nor defined …*'. Hence it is admitted that the term terms is well understood by the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may*



Amazon EX1004 Page 544

*not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 9 – 'audio, sound and flow rate' (Section 17).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and in the specification.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though*

*understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 10 – 'omnidirectional or bidirectional' (Section 18).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described at least in paragraphs 0145 and 0302 of the related publication US 2017/0331899.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner

only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 10 – 'condenser, elecret, dynamic, ribbon, carbon, piezoelectric' (Section 19).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described at least in paragraphs 0060, 0145, 0302, 0328 of the related publication US 2017/0331899. The Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g).

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow

the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 12 – 'digital address is a MAC address' (Section 20).**

The rejection alleges that claim 12 recites MAC address and layer 3 address together. It is respectfully submitted that the claim clearly defines MAC address and layer 3 address as an alternatives. The Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g).

**Regarding claim 13 – wireless network technologies (Section 21).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described at least in paragraphs 0060, 0145, 0302, 0328 of the related publication US 2017/0331899.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claims 14 and 15 – local wireless network technologies (Sections 22-23).**

The rejection alleges that "… *it is unclear how these networks are communicating over the Internet* …'. It is noted that claim 1, from which the claims depend, does not state that the wireless network is 'over the Intertnet' but rather that the connection to the Internet is '**via** the wireless network' (Emphasis added). The Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g).

**Regarding claim 16 – cellular telephone wireless networks (Section 24).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to*

*be equated with indefiniteness.*"). These terms are well known in the art and described in the specification. The Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g).

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the*

*claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 17 – 'integrated in, is part of, or is entirely included in an appliance (Section 25).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness*."). This terms are well known in the art and are exampled and described at least in paragraphs 0177 and 0197 of the related publication US 2017/0331899.

b. According to the Action it is clear that the terms are well understood by the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 18 – appliance (Section 26).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification. The Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g).

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations*



Amazon EX1004 Page 553

*contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 19 – food (Section 27).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).



Amazon EX1004 Page 554

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 20 – food (Section 28).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA

1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 21 – HVAC (Section 29).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification, suchg as in paragraph 0527.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not

articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 22 – appliances (Section 30).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification. Further, the rejection mentions claims 18, 19, and 20, that are not

relevant to claim 22 (except for being dependent from the same claim 17).

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim



Amazon EX1004 Page 558

Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 23 – cleaning appliance (Section 31).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification. Further, the rejection mentions claims 18, 19, and 20 that are not relevant to claim 23 (except for being dependent from the same claim 17).

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though*



Amazon EX1004 Page 559

*understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 24 – appliances (Section 32).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification. Further, the rejection mentions claims 18, 19, and 20 that are not relevant to claim 23 (except for being dependent from the same claim 17).

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the

scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 25 – various type of light (Section 33).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness*.").

b. The rejection is based on that "… *the various type of light … requires specialized hardware, and are categorically all different and not interchangeable*.". First, at least to some degree, the various light types are not totally different and are interchangeable to some degree. Further, the various type of light clearly share common use or structural similarity relating to light. Second, even if the various types "… *requires specialized hardware, and are categorically all*

*different and not interchangeable*.", the Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g).

c. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

**Regarding claim 26 – various electric light sources (Section 34).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness*."). These terms are well known in the art and described in the specification.

b. The rejection is based on that "… *a plurality of electric light sources bundled together without any rationale since*

*each belongs to a separate category of light source … and are all different and not interchangeable*.". First, at least to some degree, the various light sources are not totally different and are interchangeable to some degree. Further, the various type of light sources clearly share common use of emitting light or structural similarity. Second, even if the various types "… *belongs to a separate category of light source … and are all different and not interchangeable*.", the Action provides no legal basis WHY such limitations cannot be used as alternatives in a single claim. In contrast, alternative limitations are clearly allowed according to MPEP 706.03(y) and MPEP 2173.05(g).

c. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

**Regarding claim 27 – linear / rotary actuator (Section 35).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification, such as in paragraphs 0091-0095 and 0402-0414.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide

Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 28 – sounder (Section 36).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification, such as in paragraphs 0099-0102, 0163, and 0433-0445. Further, the rejection mentions claims 6, 7 and 27 that are not relevant to claim 28.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 29 – sounders (Section 37).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification, such as in paragraphs 0099-0102, 0163, and 0433-0445.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA

1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Regarding claim 30 – sounder actions (Section 38).**

a. The Action clearly confuses breadth with indefiniteness. In re Miller, 441 F.2d 689, 693 (CCPA 1971) ("*[B]readth is not to be equated with indefiniteness.*"). These terms are well known in the art and described in the specification, such as in paragraphs 0099-0102, 0163, and 0433-0445.

b. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).]. In particular, the Action has not



Amazon EX1004 Page 567

articulated reasons WHY a skilled artisan would have difficulty understanding the terms or the scope of the claimed subject matter. Even if there were a lack of descriptive support, which is not, as discussed herein, the absence of descriptive support alone does not necessarily demonstrate indefiniteness. [See *In re Borkowski*, 422 F.2d, 904, 909 (CCPA 1970) and MPEP § 2174. It is clear from the Action that the scope is understood to the Examiner, and that the Examiner only requires to narrow the claim and limit it, which is NOT standard for compliance with § 112, *second* paragraph. See In re Hammack, 427 F.2d 1378, 1382 (CCPA 1970).

c. The claims, in particular when interpreted under BRI, need not any additional details, and the Action clearly suggest importing limitations to the claim, while "*Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment*." Superguide Corp. v. DirecTV Enterprises, Inc., 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also Liebel- Flarsheim Co. v. Medrad Inc., 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004).

**Ground of Rejection to be Reviewed on Appeal**

Office Action, section 39 pages 14-16

Claims 1-30 are rejected under pre-AIA 35 U.S.C. 101 as being directed to a judicial exception.

**Argument #3: The claims are patent eligible under §101**

a. In a final rejection in this application (15/657,163) dated January 25, 2018 on pages 3-4, the SAME claims were rejected under § 101 as directed to judicial exception based on the CyberSource, Classen, and FairWarning judicial exception, while the current Action is based on the 'Electric Power' exception. The Examiner clearly continually shifting his position resulting in improper '*moving target rejections for [applicant] to traverse*' (See CAFC Decision on June 1, 2018).

b. The Action does not provide a reasoned rationale that identifies the judicial exception recited in the claim and why it is considered an exception. In particular, while method claim 1 recites various steps, and the Action has not adequately articulated why the claimed concepts recited in these steps are 'abstract idea'. Therefore, the Action has not satisfied the prima facie burden of clearly articulating the reasons why the claimed invention is not eligible.

c. The Action itself on page 33 states that the field of the invention is "*controlling the actuators based on the data (sensors)*", and on page 32 "*capturing the data collected from physical sensors, transmitting the data to an external network, processing the data at the monitoring/control server, receiving the commands for controlling the actuator from the monitoring/control server over the external network and controlling the actuator per the received commands*". Further, the Action itself admits in pages 14-15 that the claim recites steps of '*a method using various components for use in a building, including a microphone to capture the human voice, sending the data to an internet-connected server, processing the voice data, generating and sending a message to an*

*internet-connected controlled device to operate an actuator in response to the received message*'. Not only that the Action has not satisfied the prima facie burden of clearly articulating the reasons why the claimed invention is not eligible, the Action is clearly based on over-generalization of the abstract idea and oversimplification of the recited claim functions and is untethered from the actual language of the claims **as admitted in the Action itself.**

d. The judicial exception cited in the Action is "*collecting information, analyzing it, and displaying certain results of the collection and analysis*" based on the 'Electric Power Group' case. First, as admitted by the Action itself, the claimed method does not recite any 'collecting' information but is rather involved in **generating data**, namely producing a signal that corresponds to the human voice. Second, the claim does not involve any 'displaying' or any other direct interaction with a human. Hence the Action is clearly "*describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to §101 swallow the rule*." Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1337 (Fed. Cir. 2016).

e. The Action itself on page 33 states that the field of the invention is "*controlling the actuators based on the data (sensors)*", and on page 32 "*capturing the data collected from physical sensors, transmitting the data to an external network, processing the data at the monitoring/control server, receiving the commands for controlling the actuator from the monitoring/control server over the external network and controlling the actuator per the received commands*". Further, the Action itself admits in pages 14-15 that the claim recites

steps of '*a method using various components for use in a building, including a microphone to capture the human voice, sending the data to an internet-connected server, processing the voice data, generating and sending a message to an internet-connected controlled device to operate an actuator in response to the received message*'. – Hence the Action itself admits to specific machine or arrangement that includes a microphone, a client device, a controlled device, and an actuator connected via two different networks, hence clearly involves specific and unique arrangement that is NOT a generic computer system, according to MPEP 2106.05(b) ("*Particular Machine [R-08.2017]*"), where "*The machine-or-transformation test is a useful and important clue, and investigative tool" for determining whether a claim is patent eligible under § 101*". Bilski v. Kappos, 561 U.S. 593, 604,95 USPQ2d 1001, 1007 (2010).

f. It is respectfully submitted that these claims are not directed to a judicial exception at least because the claim limitations include various tangible and physical activities, that cannot be considered as abstract. It is noted that none of the examples provided in the USPTO guidelines include signal processing (such as processing human voice) and affecting a physical phenomenon based on such analysis. Further, as admitted in the Action itself, the captured voice is transformed into an actuator operation, according to MPEP 2106.05(c) ("*Particular Transformation[R-08.2017]*"), where "*[T]ransformation and reduction of an article 'to a different state or thing' is the clue to patentability of a process claim that does not include particular machines*." Bilski v.Kappos, 561 U.S. 593, 658, 95 USPQ2d 1001, 1007(2010) (quoting Gottschalk v. Benson, 409 U.S. 63,70, 175 USPQ 673, 676 (1972)). If such a transformation exists, the claims are

likely to be significantly more than any recited judicial exception.

g. In a former office action in section 13 of the Action (top of page 25), the Examiner notes that "… *Beliles discloses a method and system for* ***dynamically responding*** *to network events, by* ***collecting monitored data from sensors*** *and* ***detecting network events / notification*** *and then responding accordingly,* ***which is analogous to the teaching of the applicant's specifications.***" (Emphasis added). Hence, it is admitted by the Office that the claimed invention is clearly more than '***a general purpose computer***', but also involves 'dynamic responding', 'collecting data from sensors', 'detecting network events', each of which is clearly NOT part of '***a general purpose computer***', and further clearly an improvement rooted in computer networking technology and directed to solving a problem in the hardware / software / control arts.

h. First, the Action overlook various steps in claim 1 and in the various dependent claims. Second, the Action equates 'capturing the human voice data' to '*obtaining and comparing intangible data*' – A human voice cannot be considered as 'intangible data' and capturing the voice by a microphone cannot be considered as '*obtaining and comparing*' in general, and '*obtaining and comparing intangible data*' in particular. Third, the Action equates 'processing by the server' to '*collecting and comparing known information*' – A human voice cannot be considered as '*known information*', and voice processing cannot be equated to any '*collecting and comparing*' in general, and '*collecting and comparing known information*' in particular. Further, the Action states that the invention

relates to '*a storage medium, processor and instructions remaining, which are part of a general purpose computer*'. Such characterization overlooks the claimed structure of three different devices (controlled device, client device, and a server) communicating with each other in a defined way. Such a structure cannot be considered as '*general purpose computer*'.

i. It is submitted that <u>according to the Action itself</u>, the claims '*improve another technology or technical field*'. First, the Action itself on page 33 states that the field of the invention is "*controlling the actuators based on the data (sensors)*", and on page 32 "*capturing the data collected from physical sensors, transmitting the data to an external network, processing the data at the monitoring/control server, receiving the commands for controlling the actuator from the monitoring/control server over the external network and controlling the actuator per the received commands*" – Hence the Action admits to improvement of a control technology. Second, on page 19 of the Action, the Action admits to improvement of "*implementing the process to adjusts one or more devices using the speech patterns, accents and natural language processing*" – hence admitting to improvement in control technology and in voice processing technology, and further page 20 of the action, the Action itself admits to improvement '*when an abnormality occurs*'.

j. The Action seems to state on pages 15-16 that the claims are directed to 'routine and conventional functionalities' based on the background of the specification. While some of the functionalities may be known in the art as described in the specification, such features are not necessarily 'routine and conventional functionalities' - See Berkheimer v. HP Inc.,

881 F.3d 1369 (Fed. Cir. 2018) – "*Finally, the Federal Circuit drew a distinction between what is well-understood, routine, conventional, and what is simply known in the prior art, cautioning that* ***the mere fact that something is disclosed in a piece of prior art does not mean it was a well-understood, routine, conventional*** *activity or element*." (Emphasis added). Hence, the Action fails to provide any factual evidence that the claimed features are "*well-understood, routine, conventional*" as required.

k. It is further submitted that the claims are similar to other claims that were found eligible by the PTAB or various courts.

Office Action, section 7 pages 6-23

Claims 1-30 are rejected under pre-AIA 35 U.S.C. 103 as being unpatentable over Beliles *et al.* (US 2007/0283005 – hereinafter "Beliles"), in view of Buck *et al.* (US 2009/0089065 – hereinafter "Buck"), and in view of Abe (US 2012/0253480 – hereinafter "Abe").

**Argument #4: Improper combination of the Beliles and Buck references.**

a. The Beliles and Buck references are non-analogous at least because the Beliles reference discloses a system **in a building** and the Buck reference discloses a system **in a vehicle.** Further, the Beliles reference teaches security and safety **automatic operation without any human intervention** (see cited paragraphs 0015 and 0017, and throughout the disclosure), and **for detecting unwanted problems or disasters** such as fire, radiation, explosion, earthquake (see for example paragraphs 0016, 0017, and 0037), **in a stationary environment in a**

**building.** In contrast, the Buck reference teaches away from these features by teaching **'hands free'** (paragraph 0005) operation in a **moving vehicle.**

b. It is settled that "*A reference is reasonably pertinent to the problem at issue if it* ***"logically*** *would have commended itself to an inventor's attention in considering his problem.*"" *In re Clay*, 966 F .2d 656, 659 (Fed. Cir. 1992) (emphasis added). It is noted that when dealing with **voice control** using a **remote server** as claimed, would not logically be pertinent to **automatic emergency control** using **local and existing network** as in the Beliles reference. Similarly, using **automatic emergency control <u>in a building</u>** using **local and existing network** as in the Beliles reference would not logically be pertinent **to voice control in a <u>manned vehicle</u>** (as disclosed in the Buck reference). In a similar case, in Appeal 2017-009043 from application 13/693,068 decided June 13, 2018, it was decided that control in <u>a vehicle</u> (by joystick) is non-analogous to similar function in <u>a building</u>.

b. The above is further supported by the fact that Beliles is classified under U.S. Class 709/224 relating to 'ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: MULTICOMPUTER DATA TRANSFERRING - COMPUTER NETWORK MANAGING' dealing with computer network management, while Buck is classified in Class/Subclass 704/275 associated with "DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS, LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION - Speech assisted network", relating to signal processing. Handling computer networks is clearly distinct from any speech processing. It is noted that MPEP §808.02(A) explicitly recites that ***different classes "… shows that each invention has attained recognition***

***in the art as a separate subject for inventive effort, and also a separate field of search.***" (Emphasis added). Furthermore, different classes were relied upon in a restriction requirement that was issued by the SAME Examiner in a parent application 13/733,634 dated October 6, 2016.

Further, according to the restriction requirement that was issued by the SAME Examiner in a parent application 13/733,634 dated October 6, 2016, a restriction was required between Invention group I that is drawn to "*a system for commanding an actuator operation in response to a sensor response*" and Invention group V that is drawn to "*vehicle control system*". The restriction requirement itself states on page 2 that these inventions "… **are not obvious variant**" (Emphasis added), hence, **these two features is patentably different**, and thus cannot be combined. Further, MPEP §806.04(h) explicitly recites that "***Species Must Be Patentably Distinct From Each Other***". It is improper to apply a 'double standard' to the legal term of 'not obvious' – one for restriction and one for §103 rejection. Hence, it is admitted by the Office that vehicle control, as stated in the rationale, is non-obvious to be added to other systems.

c. According to page 33 of the Action, the Beliles and Buck reference are combinable since they are in an analogous art of "*controlling the actuators based on the data (sensors)*". This is conclusory and too broad since most systems in general, and most electronic or computerized control systems in particular, involves 'controlling actuators based on data'. Similarly to In re Clay, 966 F.2d 656 (Fed. Cir. 1992), the fact that the two references involves control system does not render them analogous and combinable. It is respectfully requested that the Office provide an example of a case of electronic or

control system where actuators are controlled NOT based on data or sensors.

d. The Beliles reference teaches, as admitted in claim 1 rejection, using **environmental sensors** such as smoke detectors, motion sensors, and video surveillance equipment (*See*, for example, paragraphs 0008), known to be **'binary' or 'on/off' sensors** that provides a message upon detecting an event and are expected to operate **without any human presence**, for detecting emergency or dangerous events (such as fire, flood, unauthorized physical access), for increasing human safety, acting automatically **without need for human manually responding** (See paragraph 0011), as described for example in paragraph 0018 stating: "… *increases human personnel safety* ***who would otherwise be required to manually respond*** *in the presence of danger, and further alleviates dependency upon human response (e.g., that must be both proper and timely)*." (Emphasis added). Further, as described in the cited paragraph 0028, there is **no processing** to avoid any delays, and the event detection immediately (and automatically) impact activation of actuators such as sprinkler system or door locks. Further, the Beliles invention dictates using an **existing** network infrastructure.

Combining the Buck reference features to the Beliles taught system requires adding microphones, known to be **analog sensor** for used **with a human presence**, acting **in response to the human voice**, adding voice processing capabilities as described in the stated rationale –'*speech patterns, accents and natural language processing*', and using a dedicated network infrastructure that supports the added microphones and processing. Such changes require additional elements, substantial reconstruction, and redesign of the elements, and

clearly changes the principle of operation of the Beliles reference. See in re Ratti, 270 F.2d 810, 813 (CCPA 1959) holding, under its particular facts, that the "*suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principles under which the [primary reference] construction was designed to operate*".

e. The claimed invention recites operating an actuator in response to capturing human voice, hence referring to **intentional and deliberate actuator control by a human.** In contrast, the Beliles invention focuses on security and safety **automatic operation without any human intervention** (see cited paragraphs 0015 and 0017, and throughout the disclosure), and **for detecting unwanted problems or disasters** such as fire, radiation, explosion, earthquake (see for example paragraphs 0016, 0017, and 0037). Hence, the Beliles reference teaches away from the claimed invention or from combining with the voice control disclosed by the Buck reference. Further, Beliles reference discloses a network in a building, while the Buck reference discloses a network in a vehicle, and as such would not logically would have commended itself to an inventor: "A *reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem*." In re Clay, 966 F.2d 656, 659 (Fed. Cir. 1992). Furthermore, the control in the Buck reference is based on local device that is **INTERNAL** to the vehicle, while the claim explicitly recite a server that is **external** to the building.

f. Unclear rejection. The rejection is based on the Beliles reference to teach the claimed limitation of : "*A method … for use with a client device in a building communicating over a wireless network and an Internet-connected server device external to the building, the method comprising …*". The rejection is based in paragraphs 0015, 0016, and 0034 in the Beliles reference, and quote part of the paragraphs while embedding additional text from the Examiner. First, it is not clear what text is quoted from the Beliles reference and what text is added by the Examiner. Second, it is not clear what elements in Beliles are equated to the claimed elements. For example, it is not clear what element is equated to the 'client device', what element is equated to the recited server ('server room'? 'control room'? routers?) and so forth, so the rejection in not sufficiently articulated and informative manner as to meet the notice requirement of§ 132. Id.; see also Chester v. Miller, 906 F.2d 1574, 1578 (Fed. Cir. 1990) ("*Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection*.").

g. Unclear combination. The rejection conclusory states that "… *it would have been obvious … to combine the method*" of Beliles with the features taught by the Buck reference. However, it is not clear HOW the Beliles reference is modified. For example, how and where is the microphone added, is the microphone added as a substitute or as an addition to the Beliles described sensors?. Similarly, it is not clear where and how the controlled device is located, how it is connected, and how the Beliles system is modified to include this additional (or substitute) device. Hence, 35 U.S.C. § 132

section "*is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.*" Chester v. Miller, 906 F.2d 1574, 1578 (Fed. Cir. 1990). [In re Jung, 637 F. 3d 1356, 1362 (Fed. Cir. 2011).]

**Argument #5: Improper rationale for combining the Beliles and Buck references.**

a. The Buck reference is relied upon for supporting the limitations of: "*capturing, by a microphone in the client device, the human voice data; sending to the server, by the client device via the wireless network, the captured human voice data; receiving, by the server over the Internet, the captured human voice data;… operating the actuator in the controlled device in response to the received message.*".

However, on pages 32-33 of the Action, the field of **Beliles** and Buck references is defined as:"… *capturing the data collected from physical sensors, transmitting the data to an external network, processing the data at the monitoring/control server, receiving the commands for controlling the actuator from the monitoring/control server over the external network and controlling the actuator per the received commands.*".

First, assuming *arguendo* that the Action characterization of the Beliles reference is correct, then the Beliles reference ALREADY includes all the elements combined from the Buck reference. Second, the rationale for combining the Buck reference to the primary reference of Beliles is stated on page 19 of the Action as: '… *for the purpose of implementing the process to adjusts one or more devices using the speech patterns, accents and natural language processing*'. Since the features added from the Buck reference are not disclosing any

'speech patterns', any 'accents', or any 'natural language', the rationale is irrelevant to the combined features, and the rationale provides no link to the present application, as required in MPEP 2143 that clearly states that "*Any rationale employed must provide* ***a link between the factual findings and the legal conclusion of obviousness.***" (Emphasis added), and "… there must be "*some articulated reasoning with some rational underpinning" to support the Examiner's findings and conclusion of obviousness*". See KSR Inti Co. v. Teleflex Inc., 550 U.S. 401, 418 (2007).

b. It is trivial, inherent, and self-evident that <u>always</u> adding a feature A to any device results in a device having a capability of feature A. Similarly, it is trivial, inherent, and self-evident that <u>always</u> adding the functionality of voice control results in the rationale of '… *for the purpose of implementing the process to adjusts one or more devices using the speech patterns, accents and natural language processing*'. However, the Action fails to provide any reasoning WHY any voice control is required to be added to the Beliles reference, in particular in view of the fact that the Beliles reference is directed to **automatic operation (with no human around)** and in contrast the Buck reference is directed to **human operated vehicle.** Hence, the rationale provides no link to the present application, as required in MPEP 2143 that clearly states that "*Any rationale employed must provide* ***a link between the factual findings and the legal conclusion of obviousness.***" (Emphasis added), and "… there must be "*some articulated reasoning with some rational underpinning" to support the Examiner's findings and conclusion of obviousness*". See KSR Inti Co. v. Teleflex Inc., 550 U.S. 401, 418 (2007). In particular, the primary reference that is

modified by the Action is the Beliles reference. However, the Beliles reference is NOT disclosing any vehicle or vehicle elements, and is NOT disclosing any speed or speed control, rendering the rationale as moot.

**Argument #6: Improper combination of the Beliles and Abe references**

a. Unclear rejection. It is not clear from the long cited passage WHAT elements of Abe are being combined to WHAT elements of Beliles. In particular, it is not clear what elements are equated to control server and to actuator in both the Beliles and Abe references, and how and where the Abe reference discloses that the missing recited limitations. Hence, the rejection in not sufficiently articulated and informative manner as to meet the notice requirement of§ 132. Id.; see also Chester v. Miller, 906 F.2d 1574, 1578 (Fed. Cir. 1990) ("*Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection*.").

Further, the rejection conclusory states that "… *it would have been obvious … to combine the method*" of Beliles with the features taught by the Abe reference. However, it is not clear HOW the Beliles reference is modified. For example, how and where is the actuator is added, is the actuator added as a substitute or as an addition to the Beliles described devices?. Similarly, it is not clear where and how the controlled device is located, how it is connected, and how the Beliles system is modified to include this additional (or substitute) device. Hence, 35 U.S.C. § 132 section "*is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to*